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ELEMENTARY PRINCIPLES OF ECONOMICS

being Part I of
INTRODUCTION TO ECONOMICS

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I

INTRODUCTORY

§1. Subject-matter of economics.—The natural sciences are those which deal with man's physical environment—matter, motion and energy—and include astronomy, physics and chemistry. The social sciences are those which deal with man as a member of society. The relations that arise among men form the subject-matter of distinct social sciences such as ethics, politics and economics (see §9 below). Ethics is concerned with what man ought or ought not to do. Politics deals with the relations of man and the State. And economics is concerned with man's wants and his efforts to satisfy his wants.

'The starting-point of all economic activity is the existence of human wants. To satisfy hunger and thirst, to secure shelter and to provide clothing were the chief aims of primitive man and constitute even today the motor force of all society.'¹ Wants give rise to efforts, and efforts secure satisfaction. In primitive society man lived by his direct efforts, growing his own food, putting up his own cottage and so on. But as his wants increased he came to depend more and more on the efforts of other persons for their satisfaction. He exchanged the surplus of what he produced for the surplus production of other men. The exchange was at first direct and gave rise to barter. Thus the farmer exchanged his grain with the weaver's cloth. But as exchanges became complex and frequent, a common medium of exchange, money, had to be introduced. The farmer, for example, first sold his grain for money and then with the money purchased cloth and other requirements. This system of money exchanges is the basis of economic life today and is seen in a developed form in towns like Bombay. A complex social organization based on world-wide division of labour and co-operation has thus resulted, and this forms the subject of economics.

§2. Definition and scope of economics.—Different writers on economics describe their subject-matter in different words. Classical economists like Adam Smith, Ricardo and Mill defined economics as the science of wealth, or the science relating to the laws of production, distribution and exchange

¹ E. R. A. Seligman, *Principles of Economics*, p. 8.

of wealth. This definition was criticized as unsatisfactory by later writers on the ground that it placed wealth in the foreground and man in the background, thus ignoring the fundamental fact of economic science—that it is primarily a study of man, of course in relation to wealth. Emphasis was therefore shifted from the study of wealth to that of man.

Accordingly, until recently the following definition by Alfred Marshall was accepted as the best working basis for the study of economics, and even today there are several writers on economics who regard it as on the whole not less satisfactory than any other current definition. According to Marshall 'Political Economy or Economics is a study of mankind in the ordinary business of life; it examines that part of individual and social action which is most closely connected with the attainment and with the use of the material requisites of well-being. Thus it is on the one side a study of wealth, and on the other, and more important side, a part of the study of man. For man's character has been moulded by his everyday work and the material resources he thereby procures, more than by any other influence.'¹

Since the publication of the well-known 'Essay on the Nature and Significance of Economic Science' in 1932 by Professor Lionel Robbins, a new type of definition of economics has been offered as a substitute for the Marshallian definition, which is characterized as inadequate. Robbins defines economics as 'the Science which studies human behaviour as a relationship between ends and scarce means which have alternative uses'.² Economics, in other words, is concerned with that aspect of human behaviour which arises from the disposal of limited means to achieve given ends or wants. While, on the one hand, man has a multiplicity of wants or ends, the means, namely the time, the physical and mental energy at his disposal and the resources provided by nature for achieving these ends, are definitely limited. No doubt in a few cases resources or means, such as the air we breathe, are available to us in unlimited quantities and are 'free' goods (though even air may cease to be a 'free' commodity, as for example in a theatre where it has to be supplied by means of fans which mean effort) and there is no need to 'economize' them. But barring such exceptional cases scarcity of means to satisfy our innumerable wants is almost a universal condition of human behaviour, e.g. in the case of food, clothing,

¹ A. Marshall, *Principles of Economics*, 8th ed., p. 1.

² L. Robbins, *Nature and Significance of Economic Science*, p. 16.

house-room, recreation, etc. It is this need for economizing scarce means and avoiding waste which imparts a unity to the subject of economic science, or the forms assumed by all human behaviour in disposing of scarce means. It may be explained here that scarcity does not mean absolute scarcity but rather relative scarcity in relation to demand, and implies effort or sacrifice which is necessary for the satisfaction of our wants.

It is essential to bear in mind that not only are means scarce but most of them can be used in alternative ways to satisfy competing or conflicting wants or ends. Thus we can drink our milk or have it made into umbrella handles; we cannot do both. Or again, we may use land for raising crops or building houses; we cannot do both. If we choose one thing we must give up others. 'Thus, the limitation of our resources and their ability to satisfy different wants creates a problem, the problem of choosing how to dispose of these resources: which wants to satisfy, since they cannot all be satisfied. The economic problem is, therefore, essentially a problem arising from the necessity of *choice*—choice of the manner in which limited resources with alternative uses are disposed of. It is the problem of the husbandry of resources.' This principle is illustrated by the housewife trying to choose between different ways of spending her limited income so as to secure maximum satisfaction, or by the business man trying to divide his limited resources between the various factors of production, such as labour and capital, so as to attain the best results. Likewise, the administrator has to divide in the best way he can the limited state revenues between various ends of state activity, such as defence of his country or the development of nation-building departments like agriculture and industry.

The Marshallian definition of economics as a study of the causes of material welfare is criticized by Robbins as a *classificatory* conception, marking off certain *kinds* of human behaviour directed to the procuring of material welfare. The Robbinsian conception of economics as a science of disposal of scarce means to achieve alternative ends is considered to be more satisfactory and scientific because it is *analytical* and focuses attention on a particular *aspect* of behaviour, namely the form imposed by the influence of scarcity. Any kind of behaviour—whether production of potatoes or production of philosophy—which involves the need for economizing resources

¹ E. Roll, *Elements of Economic Theory*, p. 13.

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or scarce means falls within the scope of economic generalizations. Economics thus does not limit itself only to certain kinds of behaviour directed to the procuring of material welfare. It is further argued that the terms 'material' and 'welfare' are ambiguous and that the latter implies moral judgement which is not germane to the study of economics.

The definition given by Robbins has in turn been criticized as too narrow, being based on dry deductive logic and lacking in the human and realistic touch which characterizes the definition offered by Marshall. Perhaps the substitution of economic welfare for material welfare as suggested by Professor Pigou, who defines economics as a science of economic welfare,¹ would remove the ambiguities of the Marshallian definition. Economic welfare in this context simply means economic satisfaction or utility and does not indicate either approval or disapproval of the particular want, such as demand for alcohol or war production. Economics is thus neutral as between the various ends or wants. It is concerned with their *quantity* and not their *quality*. Economic welfare from this viewpoint would cover all goods, material and immaterial, the acquisition of which involves effort or sacrifice and which therefore command a money price in the market; that is to say, which imply the scarce means emphasized by Robbins.²

It matters little which of the above definitions of economics we adopt, so long as it serves to bring out two fundamental points, namely that (i) economics is a *social science*, i.e. it considers man not in isolation but as a member of a group; and (ii) it considers only that part of his activities which is related to the acquisition (that is to say, utilization of scarce means) and enjoyment of *wealth* (which consists of material and non-material useful exchangeable goods).³

§3. Is economics a science or an art?—The full title of Adam Smith's famous treatise is *An Inquiry into the Nature and Causes of the Wealth of Nations*. This seems to suggest that he wanted, in the course of his study, to elaborate canons of practice that might be useful to practical statesmen. And, as a matter of fact, he does not draw a clear distinction between the study of political economy regarded as a science and the study regarded as an art. Later writers have generally emphasized the character of economics as a science. This

¹ A. C. Pigou, *Economics of Welfare*, p. 1.

² N. B. Dearle, *Economics*, p. 4.

³ For a detailed analysis of the term wealth see ch. iii.

means that we are more concerned to discover laws (uniformities and sequences) than to lay down rules of conduct for statesmen or practical men of business. Our business is to *describe* more than to *prescribe*. Our standpoint is positive and scientific rather than practical or ethical.

§4. **Practical significance of a study of economics.**—The economist does not set out with any definite intention of laying down rules of practical conduct. But this does not mean that his investigations have no practical value.¹ As a matter of fact they are of the highest practical significance. If the economist discovers that such and such causes lead to the increase of national wealth, and that such and such other causes lead to the decline of national wealth, the practical statesman will naturally encourage the former set of causes and avoid the latter. One of the most vital questions of the day is whether it is possible to abolish poverty and to give everybody the means of leading a comfortable and cultured life. And since the economist rightly believes that his studies go, if not the whole way, at least a long way towards answering this question, the science of economics must necessarily be helpful to the social reformer. The statesman, the business man and the worker will all benefit similarly by a sound knowledge of economics. It will broaden their vision and it will stimulate their faculty of sympathy. The difficulties between capitalists and workers, for example, will be lessened if either party learns to appreciate at its true worth the part played by the other in the joint task of wealth-production. The study of economics 'enables us to conceive the far-reaching implications of alternative possibilities of policy' (e.g. free trade *v.* protection) and within our 'limitations to act consistently'. It thus provides 'a technique of rational action'.² We have said enough to help the student to realize that the study of economics, besides providing a valuable mental discipline (being in this respect comparable to mathematics), possesses a high practical significance. It is indeed true that there are many important questions affecting our happiness involving other than economic considerations, and obviously economics can have no voice in settling these. On the other hand, economic considerations have to be taken into account, along with other considerations, in deciding many equally important questions; and there are questions

¹ cf. 'Economics is a science and not an art, but it is the type of science adopted to form the basis of an art' (Pigou).

² Robbins, *op. cit.*, pp. 156-7.

where economic considerations alone count, and have to be admitted as of predominant importance.

§5. Assumptions of economics.—In order to obtain exact results, hypothetical and abstract economists have used the conception of the Economic Man. It is assumed that the Economic Man always seeks pleasure and avoids pain; that, for him, pleasure consists in the pursuit of wealth, and pain in doing the necessary work for obtaining wealth. Such a person is further held to be subject to *free competition*, and to move freely from place to place, and from one occupation to another, as directed by self-interest. Certain familiar statements which are laid down by economists follow from these simple assumptions; for instance, the statements that capital will flow in the direction of the highest interest, that labourers will move readily to places or occupations where they can earn the highest wages, and that there can be only one price for the same commodity in a given market at any given time.

These assumptions are not entirely true. But they are sufficiently true to serve as starting-points, and that is why the conclusions drawn from them have been found by experience to be useful as guides to the understanding of economic phenomena. Whether we like it or not, we have to admit that there is no other motive which exercises such a powerful and continuous influence on human conduct as the economic motive. To the question whether this characteristic of human nature is not deplorable, the strait-laced economist has no answer *as an economist*. He will say: 'I am concerned with "what is" and not with "what ought to be"—with *facts*, not with *ideals*. It is not for me to approve or to disapprove, but to take facts as they are and argue on their basis.' However, if pressed for an answer, he will say that the motive of economic betterment which wields such a universal power over civilized mankind, is not necessarily a selfish or ignoble motive. In modern society it commonly expresses itself in the desire for the acquisition of money, which gives its possessor a command over wealth or the good things of life. If a man wishes to earn money in order to gain independence and to be able to lead a cultured and refined life, we must regard this as a laudable desire. As Marshall puts it: 'Money is a means towards ends, and if the ends are noble, the desire for the means is not ignoble.'

But to return to our point. Strictly speaking it is not the business of the economist to pass moral judgement on the universal prevalence of the economic motive. He notes the fact that it exists, and makes a special study of it. He is,

however, far from holding that human conduct is (or ought to be) under the sole dominion of the economic motive, and from time to time he finds it necessary to call attention to the fact that strictly economic conclusions require modification so as to allow due weight to the operation of other influences. If money is the point on which the main interests of the economist converge, this is because he, like every other specialist, is entitled to mark out his own particular field of investigation, and secondly because 'in this world of ours it is the one convenient means of measuring human motive on a large scale' (Marshall).

§6. **The question of method.**—There are two well-known methods adopted in pursuing scientific investigations: the *deductive* and the *inductive* methods. In the deductive method we proceed from a few simple well-established propositions or assumptions such as those referred to above. From these we draw a number of conclusions and see how far they are supported by actual facts. If the facts do not support our conclusions, we shall be impelled to find out the reason, and may succeed in discovering the existence of counteracting causes; or perhaps we may find it necessary to accept a certain correction or rectification of our original assumptions.

In addition, we draw upon economic history, statistical records or personal observation, and collect what appears to us to be a sufficient number of particular instances, from which we proceed to generalize. These generalizations may again be tested by referring to actual experience, and amended as may be necessary.

In economics, as in most other sciences, we find that the most serviceable results are reached by a judicious combination of both these methods. Marshall says we may best begin our study of economics with a preliminary simplification, by drawing a ring-fence round the particular phenomena to be studied and regarding them in temporary isolation. In the beginning we may chiefly use deduction, but induction must soon follow, and every step and conclusion must be compared with the infinite variety of real life.

§7. **Nature of economic laws.**—The laws of all sciences are hypothetical or conditional. They state that given certain conditions, certain results follow. The laws of economics are similarly hypothetical or conditional. If the conditions are there, the stated consequences will follow. For example, if prices rise, demand will contract. It may, however, sometimes happen that even if prices rise, demand may remain the same as, or may even be greater than, before; and this

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may be due to the fact that demand also has risen at the same time as prices. Because there is no actual contraction in demand, as the statement of the law leads us to expect, it would not be right to say that the law is invalid. What we ought to recognize is that, though the law is perfectly valid, its appropriate effect is masked or cancelled by the operation of another equally valid economic law, which says that 'if demand rises, prices rise also'. When two separate causes, each operating in a different direction, are at work simultaneously, the final result, as actually experienced, will depend on the relative strength of the two causes. If an object is being pushed and pulled at the same time, it will remain stationary if the two forces applied are equal in strength; otherwise it will move forward or backward according to whether the pushing or the pulling is the more vigorous. This analogy applies fully to the operation of economic causes. In order to draw attention to possible counteracting causes, we usually say in economics that such and such causes *tend* to produce such and such effects. Or the same object is served by adding a qualification to the statement of a law such as 'other things remaining the same', or 'in the absence of counteracting causes'. All scientific laws are in this sense merely statements of *tendencies*, and it is a mistake to suppose that this characteristic belongs only to economic laws. There is, however, a sense in which economic laws differ from scientific laws proper. They are more liable to refuse to fit in with actual facts, because they deal with human behaviour, and since human beings (unlike natural forces) have a will of their own, we can never be quite sure that they will always react in a particular manner to certain given conditions.¹ This element of uncertainty would have been very much greater if we had been dealing with the behaviour of *individuals* and their scales of valuation.² But in economics we deal *not with individuals but with groups*, and it is possible to be more confident about the behaviour of groups than of individuals. We may not feel certain about an individual that because the price of a commodity has fallen he will buy more of it. But we can make such a statement with con-

¹ Another reason is that the scope for experiment (for isolating causes in order to observe their effects) is very limited in economics. If we want to observe the effects on the wages of labourers when their numbers are reduced by half, we cannot kill off half the labouring population or deport it to another planet.

² On this point the reader may consult Robbins, *op. cit.*, pp. 126-8.

siderable confidence with regard to a market or a whole group of buyers.

While, owing to reasons indicated above, economic laws are not so exact as those of the physical sciences, they *possess greater exactitude than the laws of the other social sciences*. This is due to the fact that the particular human motives with which economics is concerned are *measurable in terms of money*. As the other social sciences do not possess any such measure, their conclusions are necessarily vaguer and more indefinite. Economic laws, being *hypothetical* statements, must not be confused with statutory, moral, customary or religious laws, which are commands. Any citizen proved to have disobeyed any command of the State has to suffer the appropriate punishment. Society also has its own more or less effective way of punishing breaches of moral, customary or religious laws by mere disapproval or, in more serious cases, by fines or social ostracism. Economic laws, on the other hand, are not commands in this sense. They are in the indicative mood and not in the imperative mood. They do not say 'Do this' or 'Do not do this', but they assert that certain causes are followed by certain effects. If we do not desire the effects, then it is open to us to avoid the causes or to counteract them. There is no such thing as 'disobeying' or 'acting contrary to the laws of political economy', for the simple reason that these laws do not command us to act or refrain from acting in a particular way. We may of course act in ignorance of these laws or fail to understand them, just as we may fail to understand a proposition of Euclid. Yet we do not talk of disobeying a proposition of Euclid, and strictly speaking it is quite as absurd to talk of disobeying or acting contrary to an economic law.

§8. Principal divisions of economics and the interrelation between them.—Economics, as said above, deals with man in relation to wealth. In the complex economic organization of modern society the activities of man in relation to wealth have to be studied from various points of view, namely, consumption, production, exchange, and distribution of wealth. These give us the traditional four principal divisions of economics. In view, however, of the important role played by modern States in the economic life of the community, State economics or the economics of government, of which public finance is the most vital aspect, may be added as the fifth division of economics.

It is necessary to emphasize that none of these divisions can be altogether isolated from the others. All are involved

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in most instances of economic activity, the essence of which lies in the disposal of scarce means for the attainment of alternative ends.¹ Let us see how the various divisions of economics are interrelated and interdependent. We shall also thereby gain a general idea of the principal topics of economics.

(i) *Consumption of wealth*.—Since the existence of our wants is the starting-point and basis of all economic activity, logically perhaps the theory of wants, or consumption of wealth, ought to be treated first.²

By 'consumption of wealth' we mean the use of wealth for the satisfaction of our various wants and desires for material and non-material things. Consumption is the reverse of production. Just as man can produce only utilities, so he can consume nothing but utilities. Often consumption is nothing more than *usage*, as when we *use* furniture or houses or enjoy pictures. The study of consumption, which will be undertaken in detail later, includes a consideration of various questions, such as the characteristics and classification of wants, the Law of Diminishing Utility, the principle of Equimarginal Utility,

¹ Some modern economists do not accept the traditional divisions of economic theory on the ground that they are artificial and calculated to produce in the minds of beginners the misleading notion of independent categories successive in time. Besides, under the traditional arrangement there is a tendency to admit within the subject of production a good deal of irrelevant matter, e.g. factory organization, technical education, industrial psychology, etc. There is, therefore, a growing tendency among economists to approach the subject from a different angle 'For the older divisions of the subject . . . they substitute a study of the subject as a whole, when its various elements are fixed in quantity and so distributed that there is no economic motive for change, and then consider the effects when changes' (e.g. in the growth and distribution of population, technical progress, growth of capital, etc.) 'in these elements are introduced. These divisions are met with under various names, sometimes as static and dynamic theory, but more usually today as equilibrium theory, and the theory of variations' (M. Briggs and P. Jordan, *A Textbook of Economics*, 4th ed., p. 21. For a fuller discussion of this topic see Robbins, *op cit*, pp. 64-71).

In this elementary book we think it desirable to adhere to the traditional arrangement. Although the different divisions of economics are related to one another they cannot all be merged into one single department. We treat them separately, because such separation helps in economic analysis and makes for simplicity and clarity. Besides, although each of these divisions has affinities with others, each also has its special problems which are best treated separately.

² This subject was until recently neglected by economists. Thanks, however, to the psychological studies of human desires and wants by economists of the Austrian school and other modern economists like Marshall, the theory of consumption is now receiving greater attention.

Engel's Law of Family Expenditure, Consumer's Surplus, the Law of Demand, etc.

(ii) *Production of wealth*.—Next follows the study of production of wealth. It is obvious that man cannot create matter any more than he can destroy it. He can, however, create *utilities*, which is a very different thing. This means that he can transform, adjust and arrange matter or materials supplied by nature so as to endow them with utility, i.e. to bring them into a condition in which they can be used for the satisfaction of his wants. Production therefore means the creation of utilities.¹ Under Production we discuss the main factors of production, namely land, labour, capital and organization; the different branches of production, e.g. agriculture, manufactures and mining; the Laws of Returns, namely diminishing, increasing and constant returns; and industrial organization including combinations, trusts and cartels, division of labour and localization of industry.

Relation between consumption and production.—All wealth that is produced is sooner or later consumed; in fact consumption is the sole purpose of production. Production is the means and consumption is the end. Being the source of all economic activity, consumption directs the course of production. Production in its turn influences consumption for the obvious reason that the volume of production sets a limit to the amount of consumption and determines the standard of life of a people. Economically advanced countries like the United Kingdom or the United States have a much higher standard of life than economically backward countries like India and China with their low production. Again, whether consumption is rational or not has an obvious bearing on economic efficiency and ultimate welfare.

In a sense the production of wealth involves the consumption of commodities or energy. However, this is not consumption proper. For example, the consumption of coal by an engine is really an act of production. This is sometimes referred to as 'productive consumption'. On the other hand, consumption of wealth ('final consumption') as such leads to the *direct* satisfaction of human wants.

(iii) *Exchange of wealth*.—Under the present economic organization no one is self-sufficient. Each individual is ordinarily dependent on others for the satisfaction of his needs, because each specializes in the production of some particular

¹ Production involves the creation of one or other of three kinds of utilities: *form utilities*, *place utilities* and *time utilities*. See ch. v.

commodity or service. What he does not produce himself he must obtain from others in exchange for what he does produce. Exchange is thus a vital part of our present economic system, and we shall have to consider various problems such as the basis of exchange and valuation, the mechanism of exchange-markets, money, credit and banking, and international trade.

Relation between production and exchange.—Most production nowadays being for the market and ordinarily not for the direct satisfaction of the producer's own needs, production and exchange are closely interrelated. Indeed exchange may be regarded as the last link in the chain of production, which is not complete unless the commodity or service that is produced is placed in the hands of the consumer. Exchange is thus the connecting link between production and consumption in modern economic organization. Nevertheless value and exchange raise so many complex and far-reaching issues that they demand separate treatment.

(iv) *Distribution of wealth.*—The apportionment of the wealth that is produced among the various factors of production that have collaborated in its production is called the distribution of wealth. Four principal shares may be distinguished: (a) Rent, the share of nature or land, (b) Wages, the reward of labour, (c) Interest, the income of capital and (d) Profit, the remuneration of enterprise. In our complex economic organization, it is by no means easy precisely to determine these respective shares. In fact, the subject of distribution of wealth is the most controversial one in the whole field of economics, and impinges upon some of the most important current problems and controversies, e.g. the struggle between capital and labour, and the issues raised by the criticisms of the existing economic system in general and that of distribution of wealth in particular, by the various schools of socialism. We shall consider some of these questions in chapter xvi.

Relation of distribution to consumption of wealth.—Distribution is connected with consumption since it determines the relative standard of living of the various productive classes.

Relation of distribution to production of wealth.—The volume of production determines the magnitude of the various shares in the aggregate. The national dividend available for distribution and the shares of the various factors depend on the efficiency of the productive system. But production in its turn is influenced by distribution: for example, a defective and unjust system of distribution of wealth would impoverish

production, besides leading to other undesirable social consequences.

Relation of distribution to exchange of wealth.—Distribution and exchange (and value) are also connected with each other. It is instructive to consider distribution as an illustration of the theory of exchange-value. The various shares—rent, wages, interest and profits—may be looked upon as the values or prices paid for obtaining the services of the respective factors of production, though we must also pay some attention to the historical aspect of distribution. The different factors of production have certain peculiarities which distinguish them from ordinary commodities, and we must also consider the institutional basis of distribution, e.g. the system of private property and inheritance. All these special problems make it necessary to consider the subject of distribution of wealth separately. We cannot treat it merely as a particular case of the general theory of value.

(v) *Economics of government.*—We have already explained why the economics of government, or public finance, is considered today as the fifth division of our subject. The abandonment of the *laissez-faire* creed, the growing range of the economic functions undertaken by modern States under socialistic influences, the complex problems of public finance in general and of war finance in particular, the increasing importance attached to economic planning by the State—all these considerations emphasize the need for a study of this branch of economics in any systematic treatise. It must include a study of the theory and practice of the economic functions of modern Governments, the principles of taxation and public expenditure, public debt, etc.

§9. Relation of economics to other social sciences.—Economics, being a study of man (in relation to wealth) as a member of society, is closely related to other social sciences, such as sociology, politics, jurisprudence and ethics.

(i) *Economics and sociology.*—At the outset we may refer to the view put forward by Comte and other writers that economics is merely a branch of sociology, which is the general science of man and of society or social relations. They argued that all aspects of social life are so closely connected that a special study of any one of them must be futile. They urged on the economists the necessity of abandoning their special study of economics and devoting their energies to one unified and all-embracing social science. But as Marshall points out, a unified social science, however desirable, is unattainable,

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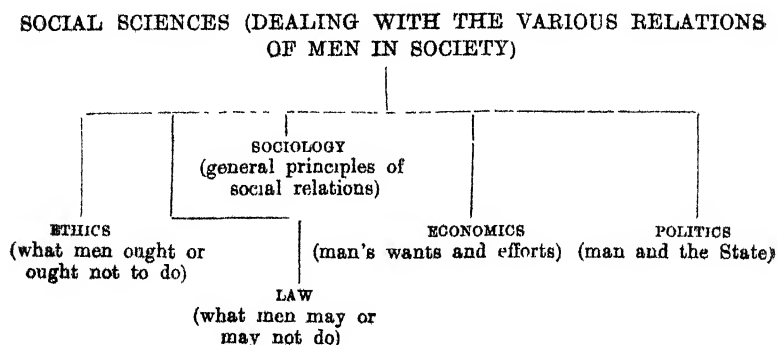
for the whole range of man's actions in society is too wide and too various to be analysed and explained by a single intellectual effort.¹ While Comte showed well the evils of extreme specialization, he failed to prove that there should be no specialization at all. No doubt the social forces act and react upon one another and therefore no science has absolutely clear-cut boundaries. It is also true that wealth, the subject-matter of economics, cannot be treated in isolation from the social phenomena connected with Church and State, standards of morality, the system of jurisprudence, and so on, particularly when the economist proceeds beyond mere wealth and touches on the practical problems of welfare.² We may further remind ourselves that in our final decision in regard to many social problems, economic considerations may have to yield to political or ethical ones.

The best plan would therefore be, while treating economics as a separate social science, to discuss its points of contact with allied social sciences. The separation of economics is essential for economic investigation and for a proper comprehension of economic principles; while the study of its relations to other social sciences enables us to view it in its proper perspective in the scheme of social sciences.³

¹ Marshall, *op. cit.*, Appendix C.

² cf. 'Economics is not a complete philosophy of society, it does not give a complete account even of that part of human conduct which it studies. The social relations to which business gives rise are the subject-matter not only of economics, but also of the science of politics, the study of social action in general, and of ethics, the study of conduct in general.'—H. Clay, *Economics for the General Reader*, p. 16.

³ The scope of the different social sciences is roughly indicated by the following diagram taken from Sir Henry Penson, *The Economics of Everyday Life*, Part I, p. 6.



(ii) *Economics and politics*.—Economics, as we know, deals with man's activities in pursuit of wealth, while politics deals with government and the relations of the citizen to the State. Since economic activity is carried on within the framework of the State, it is possible for the latter consciously to modify economic conditions by its policy and laws in relation to trade, taxation, labour conditions and land. On the other hand, economic conditions of production and distribution considerably influence the forms and functions of government. Thus the structure and the functions of the Government of a pastoral country are naturally quite different from those of a highly industrialized country. Finally, there are certain problems common to both the sciences (e.g. the problems of State industries, currency and taxation) though their viewpoints are different, the viewpoint of politics being administrative, whereas economics is concerned with wealth and economic efficiency. The wide extension of the economic functions of the State in recent times has increased the points of contact between economics and politics and there is a better appreciation of each other's point of view on the part of the administrator and the economist.

(iii) *Economics and jurisprudence*.—Much the same relationship also subsists between economics and jurisprudence, the science of law which seeks to lay down what an individual may or may not do. Legislation is moulded largely by social and economic conditions, which in their turn are influenced by law. Thus, while factory legislation is the outcome of the Industrial Revolution, the Law of Primogeniture leads to concentration of land in a few hands and the principle of equal inheritance ensures a widespread division of property although it also leads to a minute fragmentation of land.

(iv) *Economics and ethics*.—The relationship between economics and ethics has been the subject of a prolonged and bitter controversy. Some writers have imagined a perennial conflict between economics (the 'science of the purse') and ethics (the 'science of conscience'). Writers like Ruskin have given many hard names to economics, calling it a 'bastard science of darkness', and a 'dismal science of "illth" rather than wealth'. Such an attack on economics was perhaps not altogether unjustified at the time it was delivered, because in the name of economic laws writers on the subject did seem to support the view that the State must not intervene to stop the abuses of capitalistic power or to prevent the exploitation of the workers by employers. This opposition to beneficent legislation like the Factory Acts was, however, based on a

grievous error, as modern economists have abundantly recognized. The strictures of Ruskin and others apply to economics in error and not to economics as correctly expounded. At the present moment they would be grossly unfair. As already hinted, economics does not inculcate the love of money, but merely explains how all men are moved by the desire to live well and therefore to seek the acquisition of material objects essential for life. At the worst, the standpoint of economics may be regarded as unmoral or a-moral (i.e. ethically neutral) but not as immoral.¹ It is true that there is no perfect agreement as to the extent of the friendly contact between these two sciences. Both being essentially social sciences studying the welfare of society, we obviously cannot divorce one from the other, and there is considerable justification for the view that 'what is economically advantageous must in the long run be right, and what is correct in ethics must in the end also be profitable to the business world'.² Thus 'honesty is the best policy' is as much a maxim of business as of ethics. Nevertheless we can never with profit conjoin the two sciences. For 'ethics is at once a science and an art: its function is to investigate the laws of morality and to formulate rules of conduct. . . . Plainly the scope of ethics is wider than that of economics'.³ Economics, on the other hand, is mainly a positive science explaining economic facts and phenomena as they are and as a rule not sitting in judgement on them. While no economist can altogether ignore ethical considerations when discussing many economic problems particularly those of the distribution of wealth, he is not justified in encroaching upon the province of ethics and in insisting on the application of ethical ideas to economic concepts. We must, however, admit that recent economic thought is coming more and more under the influence of ethics.

§10. Relation of economics to some other sciences.—Economics has points of contact with some other sciences also. Thus the facts of the physical world and important scientific discoveries and inventions obviously influence economic conditions in a country. But as a matter of scientific classification the investigation of these physical facts belongs not to economics but to the various *physical sciences*. The conclusions of these

¹ According to the definition of economics given by Robbins, economics is entirely neutral between ends and is not concerned with ends as such, i.e. their quality. See Robbins, *op. cit.*, p. 24.

² Seligman, *op. cit.*, p. 35.

³ Sir John Marriott, *Economics and Ethics*, p. 10.

other sciences are taken as the basis of economic reasoning, but they are not in themselves economic laws.

More intimate are the relations of economics to *psychology*. Many of the basic postulates of economics in relation to the study of man's desires, efforts and satisfactions are essentially psychological. The increasing attention that industrial psychology is receiving in our own times points in the same direction. Here again, a complete assimilation of economics and psychology is neither possible nor desirable. The economist simply avails himself of certain fundamental principles and conclusions of psychology.

Economics is also related to *mathematics* and *statistics*, but largely as to the method followed. Thus the Mathematical School has applied mathematical concepts to economic problems, making extensive use of algebraic formulae, equations, diagrams and graphs. Some economic problems, such as market value, the quantity theory of money, or the law of diminishing utility, deal with quantitative relations and can be treated as equations of supply and demand and illustrated by means of graphs. Such a presentation helps our understanding and makes for precision and accuracy. However, as Seligman remarks, 'the advocates of the Mathematical method (like Cournot, Jevons and Marshall) are apt to overshoot the mark. . . . The mathematical method is the abstract method pushed to the extreme. Human aspirations and human needs cannot be pent up within the limits of a mathematical formula'.¹ The mathematical method has obvious limitations and should be used with caution.

As regards statistics, while the use of the statistical or inductive method of reasoning is very helpful for purposes of illustration, it cannot be depended upon for helping us to formulate economic laws. The danger of the statistical or the concrete method is opposite to that of the mathematical method. Statistics may simply encumber economics with masses of figures without helping us to deduce any general principles from them.

SUMMARY

Economics is a social science. Wants, efforts and satisfactions constitute the essence of economics. It is the study of mankind in the ordinary business of life, i.e. the business of acquiring and spending wealth or of disposing of scarce means which have alternative uses. It is concerned with man as he is engaged in this kind of activity. However, what it considers in this

¹ Seligman, op. cit., p. 81.

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connexion is not *individual* human action but the action of groups of human beings.

In economics our primary business is to understand things as they are, to explain the forces actually in operation in the economic sphere. We are not concerned with laying down rules of conduct for the individual or the nation. That is to say, *economics is more a science than an art*. The line dividing the two is, however, a thin one, and economics is tending to have a rapidly increasing influence in shaping practical affairs. A sound knowledge of economics is of great significance to the statesman, the business man and the worker and should be helpful in promoting social harmony.

Economic reasoning is based on several *assumptions*. One of these is that of the *Economic Man*, supposed to be always moved by the motive of getting the maximum of wealth with the minimum of effort, and able and willing to transfer his labour or capital freely as dictated by this motive. These assumptions are not wholly correct but sufficiently correct, so that conclusions drawn from them are sufficiently valid.

The economist neither welcomes nor regrets the predominance of the *economic motive*. He takes facts as they are. (The motive of making money is not necessarily a sordid motive. It is mean or noble according to the uses to which money is put.) Nor does the economist hold that the economic motive is or ought to be the sole motive of human conduct. He admits (and often rejoices at the fact) that non-economic motives sometimes exercise a powerful influence on human conduct; and he may even find it necessary to modify his conclusions or his assumptions so as to make them consistent with the actual facts of life. But in the main his arguments take it for granted that man is guided by his ideas of self-interest.

In economics, as in most other sciences, the most satisfactory results are reached by using both *induction* and *deduction*, supplementing and checking each of these methods by the other.

The laws of all sciences are hypothetical. *Economic laws* are not an exception to this rule. They are statements of *tendencies*. They state that certain effects will follow from certain causes in the absence of counteracting or modifying causes. If counteracting causes are present, the effects may not be visible or may be only partially visible.

One special element of uncertainty in economic laws is that they deal with human behaviour, and the behaviour of men is uncertain. Fortunately, however, the behaviour of *groups* of human beings, with which alone economics is concerned, is more calculable than the behaviour of *individuals*, with which economics has nothing to do.

Because economics has to do with human behaviour and because in the sphere of economics there is hardly any scope for experiment, economic laws are less exact than the laws of the physical sciences. But they are more exact than the laws of other social sciences, the reason being that economic motives can be measured by money.

Economic laws must not be confused with statutory, moral or customary laws, which are commands and not mere statements telling us how certain causes are followed by certain effects.

The principal traditional divisions of economics are Consumption, Produc-

tion, Exchange and Distribution of Wealth. Public Finance, in view of its present-day importance, may be regarded as a fifth division.

These divisions, however, are more or less *closely interrelated* with one another. Their separation helps us in economic analysis.

Consumption, i.e. the satisfaction of human wants through the use of wealth, is the ultimate aim of all economic activity, so that it is connected in a vital manner with all the other branches of economics. It is clearly connected with production, as the end is connected with the means: such things are produced as are required to be consumed. Consumption also reacts on production in the sense that rational consumption increases, as irrational consumption injures, the productive capacity of a community. On the other hand, the volume of production determines the standard of living (consumption).

By *production* we understand the creation of economic utilities, as by *consumption* we understand the use of economic utilities for the satisfaction we derive from them.

Production and exchange.—Under our present economic system production is generally for sale (i.e. exchange). In fact, until what is produced reaches the hands of the consumer (i.e. until it is sold), the process of production is strictly speaking not complete. Production and exchange are thus closely linked together.

Distribution.—Every act of wealth-production involves the co-operation of those who possess the four 'factors' or 'agents' of production, namely Land, Labour, Capital and Organizing Ability. The wealth that is produced by their co-operation is shared by them and goes out as Rent, Wages, Interest and Profit. Under Distribution we explain the manner in which these shares are determined.

Distribution and consumption.—Distribution is related to consumption because it determines the relative standard of living of the four productive classes.

Distribution and production.—Production influences distribution for the same reason that it influences consumption. The amount of what is produced is also the amount available for distribution, and determines the possible magnitude of the different shares.

Distribution in its turn reacts on production. For instance, any prevalent system of distribution may result in each of the factors receiving its due, in which case wealth will be produced satisfactorily. Otherwise, if any of the factors gets less than its due it will not be willing or able to make its contribution effectively, and consequently the aggregate wealth produced will be less than before.

Distribution and exchange.—Rent, Wages, Interest and Profits, however, can be regarded as cases of value (or exchange). Thus wages are the *value* of labour, rent is the *value* of land, and so on.

Economics and sociology.—Sociology is a general science of man and social relations. Although all aspects of social life are closely interrelated, it is not desirable to treat economics, politics, etc. as mere branches of sociology, since one single science cannot do justice to the whole range of man's actions in society. The best plan is to treat economics as a separate social science and at the same time to bear in mind that it has points of contact with other social sciences.

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" *Economics and politics.*—Economics is closely related to politics, which deals with government and the relations of the citizens to the State. While economic conditions are modified by the policy of the State, the structure and functions of the Government are in turn influenced by conditions of production and distribution. Lastly, both economics and politics have certain common problems, such as currency, taxation and State industries, though the viewpoints of the two sciences are different.

Economics and jurisprudence.—A similar relationship exists between economics and jurisprudence, which is the science of law. While legislation is moulded by economic conditions, these in turn are influenced by law.

Economics and ethics.—Some writers like Ruskin have condemned economics as a dismal science which is in conflict with ethics. This charge is, however, unfair. Economics does not inculcate the love of money, but merely explains how men are moved by the desire to live. At the worst economics may be regarded as an *unmoral*, but not an *immoral*, science. It is entirely neutral as between ends. Since both economics and ethics as social sciences are interested in the welfare of society, one cannot be divorced from the other. At the same time, complete fusion of the two sciences is to be deprecated. The economist is not justified in unduly encroaching on the province of ethics and in constantly applying ethical ideas to economic concepts.

Relation of economics to some other sciences.—Economics is also related to other sciences, for instance to the physical sciences which deal with the facts of the physical world influencing economic development.

Economics is more intimately connected with psychology, since many of the assumptions of economics in relation to man's desires, efforts and satisfactions are essentially psychological.

Economics is also related to mathematics and statistics largely by reason of the method followed. The analytical mathematical method applied with due attention to economic problems like value, is useful for a better understanding of these problems. The statistical method is helpful for illustrating economic laws but not for discovering them.

II

LANDMARKS OF ECONOMIC DEVELOPMENT

EARLIER STAGES OF DEVELOPMENT

§1. **Root-grubbing and hunting stages.**—The following usual classification of the stages in economic development is helpful, especially for the understanding of earlier economic life: (i) the Hunting stage; (ii) the Pastoral stage; (iii) the Agricultural stage; (iv) the Commercial stage; and (v) the Industrial stage.¹

In the remote past savage man lived on wild roots and fruits, and in many cases practised cannibalism. He had no more needs than the brute animal, and his existence was as precarious. The root-grubbing stage was followed by the hunting stage, the transition being facilitated by the abundance of game and the use of weapons, as civilization progressed from the early Paleolithic to the New Stone age, and later to the Bronze and Iron ages. The earliest weapons consisted of objects ready at hand—wooden sticks, animal bones, tusks and teeth, pieces of stone and combinations of these. The discovery of fire and the employment of metals led to an immense improvement in tools and weapons—arrows, knives, javelins, hammers, mill-stones, daggers and saws. The hunting tribes would constantly move from one game area to another as the older areas were exhausted. Where conditions were favourable, men took to fishing and developed the skill and the methods connected with it.

§2. **The pastoral stage.**—With the growth of population, the need for a less precarious and more abundant food supply was felt, and domestication of animals partially took the place of destruction of animals by hunting. The tending of flocks of sheep and herds of cattle was now extensively practised to secure a more permanent supply of food, and incidentally to obtain clothing and transport facilities. The pastoral stage was incompatible with settled abodes. In this stage, as cattle came to be highly prized, the conception of private property in them arose, and inequality of wealth emerged owing to differences in the number of cattle owned.

§3. **The agricultural stage.**—The transition to this stage was

¹ See Seligman, *op. cit.*, pp. 69-70.

gradual. Even in the hunting stage, there was a primitive type of agriculture practised by the womenfolk. Side by side with the domestication of wild animals, we have domestication of wild plants, and in course of time agriculture appears with regular cultivation of land and settled abodes. There were more assured and growing supplies of food for man and cattle, and it became possible to support a larger population on a given area of land. Men came to be organized in patriarchal families, and the need for hard work on the land and for protection led to the use of captives in warfare as slaves. Land was held in communal ownership, but houses and moveables were the property of the family. These agricultural households or families were largely self-sufficing and had hardly any occasion to deal with the outside world. Gradually, a collection of such families gave rise to villages or village communities leading a simple, self-sufficient life. Villages sometimes developed into towns where commercial, religious or political factors favoured such a development.

§4. Transition to commercial and industrial stages.—No dogmatic statement can be made regarding the exact chronological sequence of the stages so far described. It is even less safe to be dogmatic about the sequence in the case of the later stages. Sometimes, the commercial stage followed and at other times preceded the agricultural stage. 'In the case of many coastal peoples, the fishing and commercial stages appear at the same time without the intervention of agriculture' (Seligman). It is also clear that the agricultural stage was not altogether superseded by the later commercial and industrial stages, although of course it was greatly modified. For example, extensive cultivation gave place to more intensive methods of cultivation, and in recent times agriculture is getting mechanized or industrialized so that its organization is becoming akin to large-scale industrial organization.¹

Instead of laying down any invariable order in which one stage follows another, it is more instructive to study economic development, especially in its later stages, from the fundamental point of view of the relation between producer and consumer. This involves the study of the improving technique of production, the growing division of labour, the widening of the markets, and the introduction of money and credit economy.

¹ See ch. viii.

LATER STAGES OF DEVELOPMENT

§5. **Stages of industrial evolution.**—We may roughly distinguish four successive stages or types of industrial evolution : (i) Family Economy; (ii) the Guild or Handicrafts System; (iii) Domestic Industry; and (iv) the modern Industrial or Factory System (Capitalist or Industrial Economy). We shall now proceed to describe the salient features of each of these stages.

§6. (i) **Family Economy.**—In Europe, broadly speaking, until the beginning of the Middle Ages the self-sufficing family system prevailed. The family unit, which was generally large and often included slaves and serfs, produced all that it wanted and consumed all that it produced. Collective production and consumption with a simple division of labour among the various members of the family was its main characteristic. Thus the family raised its own food, made its own clothing, put up its own houses, and met its other needs from its own resources. Naturally, in the more conservative atmosphere of agriculture in the villages, this self-sufficing family system survived longer than in the industrial and commercial towns.

§7. (ii) **The Guild (Handicrafts) System.**—Gradually the self-sufficiency of the family broke down, and a body of professional craftsmen came into existence. To begin with, the family group took the occasional help of outsiders or itinerant workers, such as carpenters and cobblers, who were supplied with the necessary materials by the family groups who invited them. With the decay of slavery and the extension of economic activity, the itinerant workers were transformed into permanent autonomous craftsmen who began to work in their own houses with their own tools and on their own raw materials, and disposed of their goods in their own shops : they often continued to cultivate their small holdings also. Production in this stage is still on a small scale and there is as yet no intermediary between producer and consumer. The market is small and near at hand, and the producer (smith, cobbler, carpenter, potter, weaver, etc.) is in direct touch with the consumer. An important feature of the handicrafts system was the association of the members of a trade or occupation into crafts or merchant guilds with their apprentices, journeymen and master-craftsmen. Religious motives (e.g. worship of a common saint) and community of professional interest were the ties holding together these functional groups, which regulated the quality of the products and their price, and also looked after the welfare of their members. Each guild was

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keen on maintaining its monopoly of a particular trade. This is the famous guild system which flourished in Europe in the Middle Ages. At one time the guilds acquired political domination and the manors sank to the position of purveyors of raw materials to the town guilds. In India also the various caste groups, or caste *panchayats*, for a long time performed functions similar to those undertaken by the European craft guilds.¹

The guild system could work only so long as the market was local and narrow. But it gradually broke down as commerce began to extend towards the close of the Middle Ages and distant markets had to be catered for. Another cause of its decay was the abuse of their monopoly and privileges by the richer guilds, which resulted in shutting out the majority of workmen from the prospect of ever becoming master-craftsmen.

§8. (iii) **The Domestic System.**—‘The next stage is marked by the advent of various kinds of commercial middlemen, who act as intermediaries between the actual workers in their small domestic workshops and the final purchasers; the widening of the market being both the cause and the result of their appearance.’² The workman was thus differentiated from the capitalist employer and partially lost his economic independence, since he was now supplied with raw materials by the employer, who also disposed of the finished product. It is however called the domestic system since the worker still continued to work in his house and usually with his own tools, unlike in the succeeding factory system. Division of labour in this stage proceeds a step further under the supervision of the capitalist middleman. This was the prevailing type of industrial organization on the eve of the Industrial Revolution in England about the middle of the eighteenth century. In India, the domestic system of industry still largely survives, though it is being gradually displaced by the factory system.

§9. (iv) **The Factory System.**—The Industrial Revolution, the advent of machinery, large-scale production and world-wide markets—all these are closely connected with the establishment of the factory system which is the typical form of modern industry. The capitalist employer now acquires complete control over the industry, which is conducted in his own workshop or factory with the help of hired labour. The work-

¹ See our *Elements of Indian Economics*, ch. 1.

² Sir W. J. Ashley, *The Economic Organization of England*, p. 36.

man of course is too poor to own either the machinery and the factory or the raw materials, and is now reduced to the position of a mere wage-earner, providing only the labour-force in return for a stipulated wage. The owners as controllers of capital not only find the market for their goods, but themselves organize and regulate the processes of manufacture. The most recent phase of the factory system is seen in the present tendency towards consolidation and integration of industry by the formation of vast industrial combinations, such as trusts and cartels.¹ Perhaps the most important feature of the factory system is production in anticipation of demand. We have also a very complex division of labour and predominance of competition instead of custom. Also, barter has been displaced by a money and credit economy and markets have become national and international in scope.

§10. Survivals of the domestic system.—While the factory system is the typical form of business enterprise today, it must not be supposed that other forms have been completely supplanted by it. The domestic system is still prevalent, especially in certain trades, such as the ready-made clothing, the weaving, lace-work, hosiery, glove-knitting, clock-making, and cane-work trades. It also exists in the so-called 'sweated trades' which are a blot on the present economic system and in which employers exploit the worst-paid labour of women, aliens and other necessitous persons who are content to work for the smallest addition to their income.

Small-scale industry or domestic industry is still predominant in India, and it is discussed in our *Elements of Indian Economics* under the heading of Cottage Industries.²

THE INDUSTRIAL REVOLUTION IN ENGLAND

§11. Meaning of 'Industrial Revolution'.—The last stage in economic development is compendiously described by the term 'Industrial Revolution'. This term is used to indicate all those changes in the conditions of life and labour brought about by the application of power to industry and transport, and the consequent substitution of the factory for the older domestic system, the introduction of new methods of production and of transport, and generally the progressive control over the forces of nature, which have been made to yield increasing quantities of wealth as well as more and more varieties of it. The period of English economic history covered by the

¹ See ch. viii.

² Ch. iv.

Industrial Revolution roughly extends over a century, from 1750 to 1850.

While the Industrial Revolution in England was catastrophic in one sense (since it involved changes in social and economic life so complete and so rapid as to be properly indicated by the term 'Revolution'), in another sense it was merely a culmination of the movements which had been in operation for nearly two hundred years. These movements came to a head and acquired sufficient momentum about the middle of the eighteenth century to cause those spectacular changes with which the name Industrial Revolution is particularly associated. The Industrial Revolution first made its appearance in England, but subsequently other countries passed through it with more or less similar results. It is thus a world-wide phenomenon. It may be said to have started in India about the middle of the nineteenth century and its effects on the economic structure of the country are described in *Elements of Indian Economics*.

§12. England before the Industrial Revolution.—Before the Industrial Revolution in England, the conditions of economic life in agriculture, industry, trade and transport were not unlike those prevailing in India at the beginning of the nineteenth century. England was then mainly an agricultural country, and both agriculture and industry were carried on on a small scale by yeoman and artisan. The transport system was primitive, and enforced a life of self-sufficiency on the local units. Trade was not much developed and the bulk of the internal trade was conducted at weekly markets and fairs.

(i) *Agriculture*.—Agriculture was conducted in the peasant village (known as the manor in the Middle Ages). Land was unenclosed and was under the primitive tillage of the common field system. The agrarian system of the Middle Ages was still in force. The arable land of each village was divided into three great strips, subdivided by 'baulks' three yards wide. The holdings of the peasants lay dispersed all over these strips and they were all bound to follow the same customary tillage; one strip was left fallow every year and on the other two were grown wheat and barley and sometimes oats. The meadows were also held in common, and the householders had common rights of grazing on the land.

(ii) *Industries*.—Industry was conducted on a small scale by the artisans in their own houses under the domestic system of industry. Already, however, various sorts of commercial middlemen had made their appearance between the worker

and the consumer, although in some centres of the woollen industry (the principal manufacturing industry of the time), such as the West Riding of Yorkshire, the non-capitalist domestic industry still survived. Another industry of the time was the iron trade, then languishing owing to the exhaustion of the forests, which were drawn upon for charcoal: coal had not as yet come to be used for smelting iron ore. The other trades were the hardware trade in Sheffield and Birmingham, linen at Dundee, and the pottery, hosiery and silk trades. The cotton trade of Lancashire, now so famous throughout the world, was at this period quite insignificant. Adam Smith mentions it only once—and then merely incidentally—in his *Wealth of Nations*. The mechanical arts were in a backward state. Even in the woollen trade, which was the staple industry of the country, the division of labour was still simple, although certain improvements, notably the fly-shuttle invented by Kay in 1738, had been adopted. The division of labour was necessarily limited because of the limited extent of the market due to undeveloped transport and communications. England, however, had certain advantages over other European nations in this respect since special facilities for water carriage were afforded by her rivers, and there were no internal barriers to trade, as there were for example in France. A feature of the industry of the time was the combination of agriculture and industry. The artisans and small master-manufacturers combined the pursuit of their handicrafts with the culture of small freehold pasture farms. Already, however, there was a tendency for the capitalist to extend his control over industry, and there were cases where factories of hand-loomes were established by an industrial capitalist on his own premises, where the workers had to go for their work.

(iii) *Transport system and exchange*.—In respect of transport, eighteenth-century England was one of the most backward of European countries. The roads were 'execrable' according to Arthur Young, being often mere horse-tracks across a miry common, or a watery hollow lane. During winter, communication was seriously interrupted. Wheeled traffic was slow, and in many places impossible. Packhorses had to be extensively used. The coach service was slow and infrequent. There was risk to life and property on the roads, which were infested by highwaymen. Agriculture and trade were thus greatly hampered. Markets were narrow and uncertain, and severely limited the scope for division of labour. Little wonder, therefore, that England was divided into a

number of self-sufficient and isolated units and communities. Commerce was confined to a few articles of small bulk and great value, and the English village had to satisfy locally most of its wants in food, clothing, pottery, implements, etc. In the country at large there were great annual fairs, held at certain places like Stourbridge (near Birmingham), where men from all over the country and even from the Continent met to buy and sell. There were also local markets for certain industries, and some internal commerce was conducted by travelling merchants and pedlars. Shops existed only in towns.

(iv) *Population*.—The growth of population was at the rate of 5.6% annually as compared with 14% during the next fifty years, and this slow growth was a reflex of the slow development of agriculture and industry. The south was by far the most populous and the richest part of England, and the shifting of the centres of population from the south to the north, which was such an important feature of the new industrial epoch, had only just begun to show itself. England was still mainly an agricultural country.

(v) *Economic policy*.—The economic policy of the State throughout the seventeenth and eighteenth centuries was that of detailed State regulation of the economic life of the nation in its external as well as internal aspects. Under mercantilist influences, the foreign trade of the country was subjected to severe restrictions, especially on the import side; the objects aimed at being national strength (which was thought to consist in a very special manner in the abundance of precious metals) and the protection of home industries, like the woollen industry, and of agriculture, against foreign competition. Internally also, ever since the Tudor period, the State had attempted, through the Justices of the Peace, to control trade by the determination of wages, regulation of apprenticeship, supervision of the quality of wares, poor relief, etc.

§13. Why the Industrial Revolution first took place in England.—There are many circumstances in the history of England which serve to explain why the Industrial Revolution made its appearance there first. The commercial revolution of the sixteenth and seventeenth centuries, caused by the discovery of America and the all-sea route to India, was the necessary preliminary to the later Industrial Revolution, since it transformed and extended the scope for internal commerce. Wide markets came into existence to absorb the mass-production of the Industrial Revolution. In the struggle for

colonial and naval supremacy with Holland and France, England ultimately emerged victorious, and this enabled her to derive the largest benefit from the new commerce. Various other factors favoured the progress of the new movement in England, such as her insular position, internal free trade, the establishment of a parliamentary form of Government dominated by a landed aristocracy with a strong industrial and commercial bent, the healthy mistrust of State regulation engendered by memories of the Stuart despotism, a policy of religious toleration which welcomed the immigration of skilled foreign artisans, and the opportune development of banking and credit. The lull in religious and political controversy and excitement further helped to concentrate attention on industry, and stimulated mechanical inventions, into the service of which were pressed the ardour and imagination already fired by the discoveries of physical science and the revival of mathematics.¹

§14. Four main aspects of the Industrial Revolution in England.—The English Industrial Revolution had four main aspects, namely revolution (i) in Agriculture, (ii) in Transport, (iii) in Industry, and (iv) in Economic Thought and Policy.

(i) *Revolution in agriculture.*—The change began in agriculture. The wasteful common field system was supplanted by a new system of land tenure and a much more efficient agriculture, using new crop manures and implements thanks to the advance in agricultural science. Land was enclosed; but the Enclosure Movement, facilitated by a Parliament dominated by landlords, resulted in the disappearance of the yeomanry and the emergence of a class of landless labourers and of capitalist tenant farmers employing them. Thus arose the present triple division of the big landlord, the capitalist farmer, and the landless agricultural labourer.

(ii & iii) *Revolution in transport and industry.*—The Industrial Revolution manifested itself also (a) in the improved means of communication, such as turnpike roads and navigable canals; (b) in the introduction of a variety of inventions in the coal, iron and textile industries [notably Hargreaves' Spinning Jenny (1770), Arkwright's Water Frame (1769), Crompton's Mule (1779), Watt's Steam Engine (1769) and Cartwright's Power-loom (1785)]; and (c) in the establishment of the factory system, which involved production on a large scale and extensive use of machinery in place of human labour.

¹ J. L. and B. Hammond, *The Rise of Modern Industry*, pp. 64-5.

About 1825, another revolution in transport methods and communications started, which in the fulness of time brought the railway, the steamship and the telegraph. This further transformed the economic life of England, which soon came to depend upon the exchange of her mineral wealth, manufactured goods and shipping services for food-stuffs and raw materials imported from abroad. She thus definitely lost her old national self-sufficiency, and her existence came to depend chiefly upon the maintenance of her vast foreign trade. Starting with the textile, coal-mining and iron industries, the Industrial Revolution gradually spread to other manufactures, and its progress was facilitated by the organization of joint-stock companies with limited liability, and by the extension of credit and banking.

(iv) *Revolution in economic thought and policy.*—In sympathy with these changes, economic thought took a new direction from the time of Adam Smith onwards. It now came to be based on the principle of natural liberty and individual enterprise as opposed to the old system of detailed State regulation, against which Adam Smith's *Wealth of Nations* was in great part a well-reasoned and powerful protest. The new economic school adopted *laissez-faire* (let alone) as its motto and was responsible for the wholesale repeal of the old Elizabethan regulations and statutes in regard to wages, apprenticeship, etc., thus removing all obstacles in the way of capitalistic enterprise and free competition and greatly hastening the pace of the Industrial Revolution. It must be remembered, however, that the *laissez-faire* policy, while it accelerated the pace of the Industrial Revolution, aggravated the evils of the period of transition, inseparable from any revolutionary change, and postponed the redress of the many social and economic grievances which had arisen mainly from the Industrial Revolution. The agitation in favour of the removal of all restrictions on foreign trade took a longer time to bear fruit. It was only about the middle of the nineteenth century that the Corn Laws—the last stronghold of Protectionism—were repealed.

§15. Results of the Industrial Revolution.—Such far-reaching changes in the technique of production, economic organization and thought could not fail to produce striking results, both desirable and undesirable.

(i) In the first place, there was an immense increase in the production of wealth, a vast extension of internal and external trade, and expansion of credit and banking.

(ii) Secondly, the position of the population of England underwent fundamental changes. There was a rapid increase

in total numbers as also a tremendous movement of the population from the south to the midlands and the north, which now became a hive of industry. There was also a big increase in the urban population.

(iii) Thirdly, there were fundamental changes in the social and economic organization of the country, with the balance of social and political power turned in favour of the capitalist classes, to the detriment of the working classes, both in industry and in agriculture.

(iv) Fourthly, domestic industry was supplanted by the large-scale factory with its thousands of 'hands' (factory labourers). They were connected with the capitalist by no other bond than the cash nexus which took the place of the old human relations between master and workmen.

(v) Fifthly, the concentration of capital and the instruments of production in the hands of a small moneyed class led to the divorce between the working and owning classes, and split society into two hostile camps at war with each other.

(vi) Sixthly, the insecure and precarious life of the labourer living under an ever-present threat of unemployment, the frequent strikes and lockouts throwing society out of gear, and the dislocation of the economic equilibrium due to recurrent crises, came to be the features of the new industrial order, and society was faced with new and complex social, political and economic problems. In short, the Industrial Revolution created the new problems of wealth without welfare and of economic instability, which are yet far from being solved. Modern socialism may be regarded as a protest against the glaring defects of the new economic system, especially on its distributive side, and against the evils of the control of the system by private capitalists. It has succeeded in discrediting the old *laissez-faire* policy and in persuading modern States to undertake measures of amelioration. Factory or labour legislation, to which every modern State has resorted more or less wholeheartedly, has necessarily meant the curtailment of the liberty of the employer, by limiting the hours of work and the age of employment, by prohibiting the employment of women at night, etc. It has also secured various advantages to the workers, such as the privilege of forming Trade Unions, a system of insurance against unemployment and sickness, compensation for injuries received in the course of employment, maternity benefits and old-age pensions.¹ State regulation of the economic affairs of the nation has

¹ See also ch. xvi.

once again become a normal feature, although it is obvious that its aims, ideals and methods are not the same as before.

SUMMARY

Economic life, as at present lived by civilized man, is the outcome of a prolonged process of evolution.

In the earliest stages man lived on wild roots and fruits and in this 'root-grubbing' stage there was nothing to distinguish his manner of living from that of any other wild animal.

The next stage was the *hunting stage* in the course of which man learnt to fashion and use various crude weapons, which improved with the discovery of fire and the employment of metals.

The third stage, known as the *pastoral stage*, was characterized by the domestication of animals which provided the means for a more reliable and more plentiful food supply than before.

The *agricultural stage*, which was the next advance, was marked by the organization of men in patriarchal families which settled down in definite localities for regular cultivation of land. The old mode of life, which involved constant wandering over the surface of the earth, was discovered to be unsatisfactory. Land was held in communal ownership and the need for hard work and protection led to the institution of slavery. These agricultural households became eventually enlarged into self-sufficing village communities.

While it may be permissible to distinguish the different stages of economic evolution as more advanced and less advanced, we must guard against any assumption as to an invariable order in which one stage was succeeded by another. The sequence is not always the same. In some cases some intervening stage may be missed altogether. And more than one stage may exist together side by side.

The later development of economic life takes us to the different *stages of industrial evolution*.

First we have the *Family Economy* under which the family unit, large in size and including slaves and serfs, produced everything it wanted and itself consumed everything that it produced.

Secondly, we have the *Handicrafts System* under which a body of professional craftsmen or specialists came into existence. These autonomous craftsmen necessarily worked on a small scale and catered for a limited market in which the producer was in direct touch with the consumer.

An important feature of the handicrafts system was the association of members of an occupation into guilds.

This *guild system* flourished in Europe in the Middle Ages. But it broke down towards the close of the Middle Ages when commerce assumed an international aspect.

The next system, known as the *Domestic System*, was marked by the advent of various kinds of middlemen who appeared as capitalistic employers of the craftsmen toiling in their small domestic workshops, now separated from the final purchasers. However, though the workman lost his independence, he continued to work in his own house, and usually with his own tools. Under the supervision of the capitalistic middleman a certain amount of division of labour did take place, but it was rather rudimentary.

The last stage is ushered in by the appearance of the *Factory System* after the Industrial Revolution with its machines, its large-scale production and its world-wide markets. The semi-autonomous worker was transformed into the factory wage-earner. Production now is in anticipation of demand. And the division of labour becomes very complex.

The establishment of the factory system was the result of the *Industrial Revolution* which, owing to certain favourable physical, political and social conditions, first occurred in England and roughly covered the period from 1750 to 1850. The Industrial Revolution completely transformed conditions of economic life.

In *agriculture* the wasteful common field system with its dispersed holdings gave place to a more efficient system. Some of the important phases of this evolution were the enclosure of land, the disappearance of the old yeoman class and finally the emergence of a class of landless labourers working for a wage under capitalist employers who secured land on lease from the big landlords.

An important aspect of the revolution was a rapid improvement in the system of *transport and communication*. Better roads and canals—and later the railway, the steamship and the telegraph—all enormously widened the scope of internal and international commerce.

The introduction of a *variety of inventions* in the coal, iron, and textile industries, joint-stock companies, the development of credit and banking, were some of the factors which made England the workshop of the world. England hereafter found it enormously profitable to concentrate on manufactures which flooded the whole world, and in return for her manufactures to import food and raw materials from abroad.

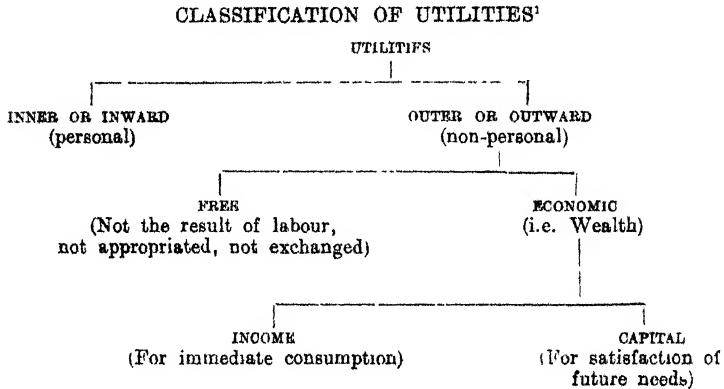
Before the Industrial Revolution, England was divided into a number of isolated and self-sufficient towns and villages with industry organized on the lines of the domestic system, and carried on with the aid of comparatively simple implements. During the seventeenth and eighteenth centuries detailed regulation had characterized the policy of the State towards industry and trade. It came to be felt as unduly restrictive, and Adam Smith's powerful advocacy of natural liberty in his *Wealth of Nations* helped materially in making a clean sweep of all this restrictive regulation and in giving complete freedom to capitalistic enterprise and to domestic as well as international trade. The new *laissez-faire* policy greatly accelerated the pace of the Industrial Revolution. It also, however, brought in its train a number of very serious social evils.

The *results of the Industrial Revolution* in England were: (i) an immense increase in prosperity; (ii) a rapid increase of population and a great shifting of it from the south to the midlands and the north; (iii) the concentration of political and social power in the hands of the capitalistic class and a lowering of the status of the worker in agriculture as well as in industry; (iv) the substitution of large-scale production for the domestic-industry type of production; (v) the splitting of society into two hostile camps, the owning employer class and the wage-earning class; and (vi) added insecurity of the economic life of the worker, industrial disharmony and recurrent economic crises.

III

FUNDAMENTAL CONCEPTS OF ECONOMICS

§1. **Utility.**—The student will find the following scheme very helpful in understanding certain fundamental economic concepts which we are now about to discuss :



Economic utilities have three distinctive marks : (i) labour. (ii) appropriation, and (iii) exchange-value. When we talk of utilities (or goods) we mean things that possess utility (or value-in-use, as it is sometimes called).²

Utility is the capacity to satisfy a human desire or serve a human purpose. 'Utility expresses a relationship between a subject and an object from the point of view of the problem of want-satisfaction.'³ It is a purely subjective and relative concept. From a moral point of view it is a colourless word. When we say a certain object has utility, we do not mean that it *ought* to be valued. We simply refer to the fact that, rightly or wrongly, it *is* valued, that people desire to possess it. It is in this sense that liquor and opium are invested with utility by economists.

As the classification given above shows, all utilities are not economic, i.e. are not wealth. Utilities like air and light, which are given free by nature and in unlimited quantities,

¹ See J. S. Nicholson, *Principles of Political Economy*, vol. I, p. 31.

² 'Utility' may mean the quality which makes a thing desirable, or it may signify the desirable thing itself. From the context the reader can easily find out which meaning is intended.

³ Roll, *op. cit.*, p. 53.

however vitally useful they may be and although recognized as such by human beings, are nevertheless not wealth.¹

§2. **Characteristics of wealth.**—Let us enumerate the characteristics of wealth :

(i) In the first place it *possesses utility*.

(ii) Secondly, it is *limited in quantity*. (Because it is *as a general rule the result of human labour* : and human labour as well as the natural resources on which it operates to produce wealth are limited. There are a few cases of wealth where human labour or sacrifice is not involved but where the term 'wealth' is justified because of the presence of other characteristics like limitedness of quantity and utility.) 'Free' goods (i.e. light, air, and water in certain conditions) are not wealth, for they exist in unlimited quantities in relation to wants and do not necessitate choice and economy; they are afforded by nature without any effort and are not appropriated by anyone. Only 'economic' goods (or scarce means) constitute wealth, for they exist in limited quantities in relation to demand, require effort and are appropriated. Of course, free goods may cease to be free and pass into the category of economic goods (e.g. water in a city or air in a theatre) and therefore of wealth.

(iii) Thirdly, *wealth is external to man and transferable*. It need not necessarily be possible to shift it bodily, but at least the right to it should be transferable. For example, a house cannot itself be transferred, but the right to it can be.

(iv) *Wealth should be capable of being appropriated*. That is, one person should be able to possess or enjoy it to the exclusion of others.

All these characteristics may be summed up by saying that wealth consists of exchangeable goods; for if a thing is not useful no one will want it, if it is 'free' or unlimited no one will give anything for it, if it is not external, no one can part with it, if it is not appropriable no one can acquire and hold it as his own property. Wealth, in other words, consists of goods which possess exchange value.²

Having stated the characteristic attributes of wealth, let us now apply our knowledge to a few sample instances.

Is the love of a mother for her child wealth? Although one of the most valuable things on earth, it is not wealth. It is not bought and sold, nor are the many voluntary services which are rendered freely by the affectionate mother to her child.

¹ See also §2.

² See Sehlgman, op. cit., p. 13.

There is nothing in our definition of wealth to suggest that it consists only of *material* things. The *services* of a servant or labourer for which wages are paid, the services of a manager or official for which he gets a salary, the professional services of a lawyer and doctor for which fees are paid, are all wealth. So are the services of a singer whom you have to pay to hear.

A man's *internal qualities* and *aptitudes* (e.g. the special skill of a surgeon or the singer's vocal chords) *are not wealth*, because although they may be a source of wealth they are not themselves transferable.

Non-material external goods consisting of relations beneficial to a man with other people are wealth because they can be bought and sold. Thus when a business changes hands, very often the sale price includes not only the value of the tangible assets but also the value of what is known as the 'goodwill' of the business, which consists of the advantage which the business has acquired and the probability of continued custom owing to the reputation already established. In the same manner a retiring doctor or lawyer may sell his practice.

§3. Classification of wealth.—The following classification is given by Marshall.¹ It will assist the student in clarifying his ideas. He should study it and compare it with Nicholson's classification quoted at the beginning of this chapter.

| | | | |
|-----------|--------------|----------|---|
| Goods are | i. External | material | Transferable (house, furniture). |
| | | | Non-transferable (sunlight, climate). |
| | | personal | Transferable (goodwill of a business). |
| | | | Non-transferable (i.e. that part of a person's business connexion which depends on personal trust in him). |
| | ii. Internal | personal | Non-transferable (i.e. a person's qualities and faculties for action and enjoyment, e.g. business ability, professional skill, etc.). |

§4. Wealth of an individual.—We may now proceed to suggest an answer to the questions (1) What is the wealth of an individual? and (2) What is the wealth of a nation?

¹ Marshall, *op. cit.*, p. 55, n. 2.

The *wealth of an individual* comprises the following principal items:¹

(i) In the first place, there are the material possessions exclusively owned by the individual, such as his house and farm, furniture and books. These are of course all transferable and exchangeable. Individual wealth also includes any shares in public companies, debenture bonds, mortgages and other obligations which a person may hold requiring others to pay money or goods to him. On the other hand, in order to ascertain his true net wealth we must deduct the debts which he owes to others.

(ii) Secondly, we have those non-material goods belonging to an individual which are external to him and which enable him to acquire material goods, e.g. his business or professional connexions, and especially that goodwill of his business which can be transferred by sale to a newcomer. But as a general rule, we exclude all his personal qualities and faculties, such as his personal skill, because they are internal to him and not transferable.

(iii) Finally, a man enjoys certain goods in common with his neighbours. They do not belong to him alone. These include civil and military security and the right to make use of public property and institutions—such as roads, street lights, public parks and museums—and rights to justice and free education. We are thus led to consider collective, national, or social wealth.

§5. **National or social wealth.**²—(i) In the first place, the wealth of a nation includes the aggregate wealth of its members and citizens as defined above. All internal debts due from one member of the nation to another should be omitted in order to avoid double counting of the same item. We must, however, deduct bonds held by foreigners from the national wealth, or any other external debt of the country. We must at the same time add bonds and shares held abroad by the citizens of a State.

(ii) Secondly, national wealth includes *public* material property of all kinds, such as roads, canals, buildings. There is, however, usually a heavy item of 'negative' wealth in the form of a large public debt to be set against this collective wealth.

(iii) Thirdly, some economists like Marshall reckon for many purposes some of the more important free gifts of nature which influence national wealth. So the Thames may be regarded as part of England's wealth and the Ganges and

¹ Marshall, *op. cit.*, pp. 56-60.

² *Ibid.*, pp. 59-60.

the Himalayas as part of India's wealth. On the other hand, other writers like Seligman are rigidly logical and contend that these free gifts are the basis of wealth, not wealth itself.

(iv) German economists have emphasized the non-material elements of national wealth; for example, the organization of a free and well-ordered State or the industrial faculties of the people. While we can count as the wealth of a nation advantages which it enjoys over other nations, we must exclude whatever is cosmopolitan in character, e.g. scientific skill, which, although it may originate in one nation, tends nowadays to be quickly copied by rival nations and thus becomes universal or cosmopolitan.

§6. Cosmopolitan wealth.¹—This notion follows from the extension of the concept of national wealth to the whole globe. It is obvious that we must omit international debts in estimating cosmopolitan wealth. Under cosmopolitan wealth, we may include such things as the ocean which facilitates commerce and must be regarded as one of the most valuable assets of the world. As already observed, scientific skill and mechanical invention are nowadays cosmopolitan in their character and form part of the cosmopolitan wealth, or the wealth of the whole world.

§7. Income.—The concept of wealth leads to that of *income*. There are two measures of wealth : (i) income and (ii) capital. Income means a flow or stream of satisfactions, while capital means a stock or fund of a series of satisfactions. We may thus say that a man is worth Rs 10,000 or that he is worth Rs. 500 a year. The income-measure psychologically and fundamentally means pleasure and benefit income, but because nowadays we are all living under a system of money economy and exchange, income has come to mean primarily money income. It is on the whole more satisfactory to measure national wealth with reference to income than with reference to capital. If a person is engaged in business, his net or true income is found by deducting from his gross income 'the outgoings that belong to its production'. Services rendered to oneself, e.g. ironing one's own clothes; or services rendered to one's family, like those of the housewife, are not included in this income, since they are free.

§8. National income.—By 'national income' or 'national dividend' we mean that part of the net income of a country which can be measured in money. Marshall's definition is classical : 'The labour and capital resources of a country act-

¹ Marshall, op. cit., p. 61.

ing on its natural resources, produces annually a certain net aggregate of commodities, material and immaterial, including services of all kinds. This is the true net annual income or revenue of the country or the national dividend.¹

§9. Value.—The concept of value is ultimately connected with that of wealth and demands some consideration in this chapter, although a great deal more will be said about it in Chapter IX. Value is the central concept of economics as well as its greatest puzzle. It cannot be neglected in the study of production of wealth, because much that is produced is in anticipation of demand at a certain *price*. It cannot be understood apart from consumption. It underlies the study of distribution of wealth, and its intimate connexion with exchange is obvious. If, after Seligman, we define wealth as consisting of things possessing value, we may define economics as the 'science of value'.²

The term 'value' is ambiguous. It is sometimes loosely used to signify utility. When we talk of *value-in-use* we mean the actual satisfaction which may vary from individual to individual. Similarly *intrinsic value* means the inherent capacity possessed by an object of yielding satisfaction, or the esteem in which we *ought* to hold things in accordance with some semi-ethical standard of judgement, and we contrast 'value-in-use' and 'intrinsic value' with value that is current—the value that is expressed by the actual rate of exchange. Strictly speaking, however, in economics we ought always to use the term 'value' in the sense of *value-in-exchange*. The concept of exchange-value dominates the whole of our science, as we are living under a system of constant exchange or interchange of wealth or possessions. The exchange-value of one thing in terms of another at any given time and place is the amount of the second thing which can be had there and then in exchange for the first. It means its rate of exchangeability.

Value is the result of the *social* estimates of goods effected by transferring them in exchange. We often say that we never know the value of anything until we have to do without it. This partially expresses the essential truth of the idea of value, which is, that we never know how much we value a thing till we come to *exchange it for something else*.³

§10. Price.—Since exchange-value means relative exchange power we can measure the value, say, of a house in terms

¹ See ch. XIII.

² Seligman, *op. cit.*, p. 11.

³ J. A. Todd, *The Science of Prices*, 2nd ed., p. 17.

of any other commodity, like cows, sheep, rice or salt, and we may say that its exchange-value is 10 cows, or 100 sheep, or 5 maunds of rice, or 500 maunds of salt. We are, however, no longer living under a system of barter or direct exchange of goods for goods. Exchange is now effected by money (gold or silver coins or notes), that is by a common medium of exchange, which also functions as a common measure of values.¹ This leads us to the conception of *price*, which is defined as exchange-value expressed in terms of money. Thus we may say that the price of a house is Rs. 500, or that of a coat is Rs. 10, or of a pen, As. 2, and so on. If we know these prices, we also know their relative values. Thus we can say that the value of the house is 50 coats or fifty times as much as that of the coat. 'Value' and 'price' are often used as interchangeable terms. But this is not correct. All values (i.e. exchange-values) cannot rise or fall together. If for example the exchange-value of a house falls from 100 sheep to 70 sheep it means that the value of sheep has risen. All *prices* may rise or fall together, but not all *values*. If the prices of *all* things rise this means that their *value* in terms of money has gone up, i.e. the *value of money* has gone *down* in terms of commodities.²

§11. Value and utility.—While no article can possess any value unless it has utility, the two terms must be carefully distinguished. The concept of value is more complex than that of utility. In the first place, value is a relative notion of the same order as weight or size.³ It necessarily implies a comparison between two or more objects and expresses a relation between them at a particular place or time. Utility is a simpler concept and it does not imply comparison between one object and another. In the second place, value implies scarcity, i.e. insufficiency of quantity in relation to demand, or difficulty of acquisition. That is why air, while it has infinite utility, has no value since it is unlimited in supply, while articles like gold or a diamond, which are scarce in relation to the demand for them, command a high value in exchange.⁴ This was what the old economists had in mind when they said that air has great value-in-use (i.e. utility) but no value-in-exchange.

SUMMARY

Utility means the capacity to satisfy a human desire or want-satisfaction. Things possessing this capacity are called 'utilities' or 'goods'.

¹ See ch. x.

² *Ibid.*

³ C. Gide, *Principles of Political Economy*, p. 45.

⁴ See also ch. iv.

FUNDAMENTAL CONCEPTS OF ECONOMICS. 41

Utilities are divided into:

- (i) 'Free utilities' and (ii) 'Economic utilities' or 'Wealth'.

Wealth possesses the following characteristics:

(a) It has utility. (b) It is limited in quantity, and is generally the result of human labour. (c) It is external and transferable. (d) It is capable of being appropriated.

In brief, wealth consists of economic goods which possess exchange-value.

Wealth consists of *material as well as non-material external goods*.

Individual wealth must be distinguished from *national wealth*.

Individual wealth:

(i) Material possessions (including evidences of debts owing from others) owned *exclusively* by the individual.

(ii) The individual's external, transferable *non-material* goods (like the goodwill of a business). We may also say that *his share* of common goods like public parks is part of his wealth.

National wealth:

(i) But such common material property *as a whole* is part of collective or *national wealth*.

(ii) The wealth of a nation also includes the aggregate wealth of its citizens (omitting their debts to one another) *minus* their debts to foreigners, *plus* any debts which foreigners owe them.

(iii) Gifts of nature—like the Ganges—which are the basis of national wealth are not always regarded as being themselves part of national wealth.

(iv) Superior political organization and higher economic faculty and efficiency as compared with other nations are important *non-material* elements of national wealth.

Any advantages of direct or indirect economic importance owned by all the nations *in common*, e.g. the ocean as a highway of commerce, progress of scientific invention, etc., may be said to constitute *cosmopolitan wealth*.

National *wealth* or *capital* can be conceived of as a *fund* or *stock* from which various satisfactions are derived. The actual *stream* or *flow* of satisfactions issuing from this fund or stock over a period, say, of a year, is the *national income* or *national dividend*.

Income nowadays has come to mean primarily *money income*.

Value is a central concept of economics. By 'value', in economics, we mean 'value-in-exchange', that is, the power of getting in exchange other commodities.

Value expressed in terms of money is called *price*.

Value expresses a relation and is therefore a relative term.

All values cannot rise or fall together, but all prices may rise or fall together.

The concept of value is more complex than that of utility, and is of the same order as weight or size. Value also implies scarcity, or difficulty of acquisition.

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IV

CONSUMPTION: THE THEORY OF WANTS

§1. **Consumption the end of all economic activity.**—The existence of human wants is the starting-point of all economic activity, and the satisfaction of human wants, i.e. consumption, is the end of all economic activity. All wealth that is produced is sooner or later consumed. Production is justified not in itself but only in so far as the wealth that is produced is consumed. Production is subordinate to consumption, production being the means, and consumption the end. The primary importance of consumption is, however, obscured because under our present economic system production is conducted mainly for profit and not for the direct satisfaction of the needs of the producer himself. The vital connexion between production and consumption is obvious, and difficulties arise at once if production is out of relation with consumption, i.e. if more or less is produced than can be effectively disposed of.

§2. **Human wants and their characteristics.**—Economic activity is due to the fact that human beings have a number of wants which cannot be satisfied without effort. The great characteristic of these wants is that there is *no limit* to them. *The insatiability of human wants in general* has always been one of the principal themes of the preacher and the moralist. When we have got one thing we desire to possess something else, and then a third thing, and so on indefinitely. Every step in human progress is marked by a growth in the number and variety of wants. We are constantly becoming acquainted with new ways of enjoyment, and as we get used to them, we come to think of them as necessities.

Although wants in general are illimitable and insatiable, with very few exceptions *every single want is satiable* sooner or later. On this characteristic is based the Law of Diminishing Utility (see §3).

Wants may sometimes be *complementary* and joined together: for example, desire for tea involves at the same time desire for milk and sugar. Another instance is desire for things which are sold in pairs like shoes, one shoe being useless without the other.

Many wants are such that their satisfaction can be secured by making use *alternatively* of more things than one. Thus

hunger can be satisfied by consuming bread or meat. The desire for a mild stimulant may be satisfied by tea or coffee. The desire for amusement may be satisfied by the cinema or perhaps by a novel. Wants are thus *competitive*. On this characteristic is based the principle of Substitution, which offers relief to the consumer from the tyranny of the monopolist.

Another characteristic is the *recurrence of wants*, not only in the case of elementary needs like food, but also in that of refined wants for comforts and luxuries. Wants thus tend to become habitual and give rise to the concept of the standard of living (see §9 below).

§3. Law of Diminishing Utility.—The fact noted above that each single want is completely satiable sooner or later has given rise to the familiar statement known as the Law of Diminishing Utility. Marshall expresses it thus: 'The *total utility* of a thing to anyone (that is, the total pleasure or other benefit it yields him) increases with every increase in his stock of it,¹ but not as fast as his stock increases.'² In simple language all that this means is that the more of a thing we have, the less we want it.

The Law of Diminishing Utility holds good for all kinds of satisfaction but is subject to the following qualifications:

(i) Up to a point every addition may yield not decreasing but increasing satisfaction. To a very thirsty man, for example, an excessively small quantity of water will bring a greater craving for water and for some time every addition will be attended with greater and greater satisfaction.

(ii) It is assumed that the units are consumed in quick succession. If a man has drunk glass after glass of water until his thirst is fully assuaged, he will refuse to drink more for the time being. But this does not mean that he will equally refuse it after the lapse of a considerable interval, when he may be thirsty again.

(iii) We also assume that the intervals are not so long as to admit of any radical change in the person himself. A partly educated man, for instance, after repeated readings of a piece of first-class poetry, may get tired of it. Years afterwards, during which his education has progressed and his

¹ It should, however, be noted that after a point every further increase in the stock of every additional unit consumed will not only yield no further satisfaction but will cause positive inconvenience or pain, e.g. an additional chair in an already overcrowded drawing-room or an additional morsel of food on a full stomach.

² Marshall, *op. cit.*, p. 93.

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faculty of appreciation has been rendered keener, he may read the same piece of poetry again but this time with infinitely greater pleasure than he ever experienced before.

The Law of Diminishing Utility is best explained by a diagram (Fig. 1). The equal divisions along the horizontal

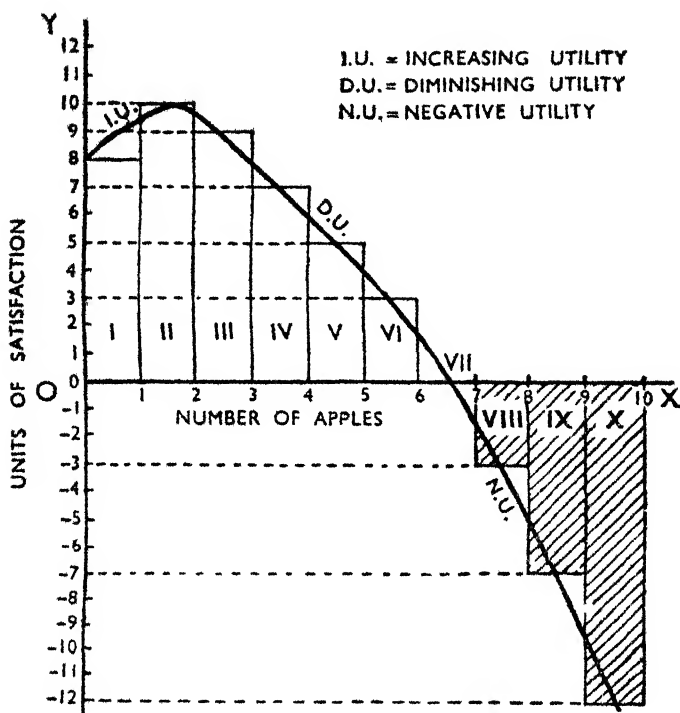


FIG. 1.—DIAGRAMMATIC REPRESENTATION OF THE LAW OF DIMINISHING UTILITY

axis OX represent equal successive units of a commodity, say apples, consumed or purchased by a person, while the equal divisions along the perpendicular axis OY represent equal units of satisfaction. Rectangle I represents the utility derived from the first apple, rectangle II the utility from the second, and so on. The utility from every additional unit may be higher and higher instead of lower and lower for a time, so that the curve may at first slope upwards as in the diagram (I.U.), but sooner or later it steadily begins to diminish (from utility 10 of the second unit to utility 0 in the case of the seventh unit, which is on the border-line between utility and

disutility). Any further increment of the supply will only result in disutility or negative utility (the shaded rectangles in the diagram).

Let us assume for the sake of clarity that each unit of satisfaction to the consumer is represented by one anna. Then, if the price of an apple were 3 as., the consumer would just be induced to purchase the sixth apple, whose utility, 3 units (which will just balance the utility of the price paid, 3 as.), will be the marginal utility, while the total utility of the supply of six apples will be $8+10+9+7+5+3=42$ units.¹

§4. Distinction between total and marginal utility.—We must carefully distinguish between total utility and marginal utility. *Total utility* means the aggregate utility of a stock of similar goods, while *marginal utility* means the utility attaching to a particular portion of it, namely, to the unit of it that is consumed last. The total utility of a stock is obtained by adding the utilities of all the units concerned. Thus in Fig. 1 the total utility (or satisfaction) obtained by consuming six apples is $8+10+9+7+5+3=42$ units. The *total utility* of a stock of goods increases with the addition of every unit, but it increases at a diminishing rate until the point of satiety is reached, and thereafter it falls. The *marginal utility* means the addition made to the total utility by the addition of the last increment consumed. Thus if our consumer thinks it just worth his while to buy the sixth apple, the utility of that unit, namely 3, is called the marginal (or final) utility. That utility is called marginal because at that point the consumer is on the margin of doubt as to whether it would be worth his while to consume any more of the commodity or whether he would secure greater satisfaction by consuming something else. It is, however, necessary to add that the marginal unit is not fixed unalterably. The number of units consumed depends, for example, on price. If price falls, more will be consumed; and if price rises, less will be consumed. The amount consumed also depends on intensity of demand. A man may come to desire a thing more or less intensely and will accordingly require more or

¹ Since the consumer has to pay for the apples he does not carry their consumption to the stage of zero or negative utility (disutility) except by mistake or under compulsion respectively. If, on the other hand, the price of an apple were 5 as. instead of 3 as., the consumer would buy only 5 apples, and the utility of the fifth apple (5 units) will be its marginal utility, which just balances the utility of the price paid (5 as.), and so on. If, however, apples were free altogether, they would be consumed up to the point of zero utility. This does happen in the case of free goods like air and water.

less of it than before, even though the price may remain the same. Thus since the amount consumed is variable according to these conditions of supply or demand, what we call the last or the marginal unit is also variable. But, whatever the amount consumed, the last unit consumed under any given set of conditions is the marginal unit.

Another point that must be made clear is that the utility of every unit in a given aggregate is the same and is equal to the marginal utility. Let us suppose that the six apples in our example are labelled *A, B, C, D, E* and *F*. All the apples, it must be remembered, are of exactly the same size and quality. Let us suppose now that one of them, *A*, is lost. In that case, the five that remain will yield utilities as in the example. The first one that is consumed will yield utility 8; the second one 10; the third one 9; the fourth one 7; and the fifth one 5. If a sixth had been there the additional utility realized would have been 3. Thus by losing *any one* of the apples *A, B, C, D, E, F* the loss of utility incurred will be 3. Therefore, the utility of every single one of these apples *considered as one of an aggregate of six* is the utility of the marginal, i.e. the sixth unit. If we consume something up to the point of complete satiety, its marginal utility¹ will sink to zero.

§5. The relation between marginal utility and value or price.

—When we speak of the value of a commodity, we do not think of its utility or usefulness in general, but of the utility of a definite quantity. As has just been explained, the utility of every unit of a given quantity of a commodity is equal to its marginal utility, since all the units are interchangeable and alike and any one of them can be considered to be the marginal unit and will be parted with on the same terms as any other. Value then is not the expression of utility in general, or even of total utility, but of marginal utility. Thus air in general has infinite utility and great total utility, but does not command any value, since owing to its unlimited stock it (i.e. any particular unit of it) has zero utility. On the other hand, gold possesses great value, since although its utility in general or total utility is less than that of air or water, its marginal utility (the utility of a particular unit of it) is very high owing to its limited supply. Utility is an essentially subjective concept. But the only way we know of

¹ Some present-day writers on economics prefer the term marginal significance to marginal utility; for example, see P. H. Wicksteed, *Commonsense of Political Economy*, p. 41.

measuring it is by the price which a person is willing to pay for a thing he desires to buy or consume. The objective test of satisfaction is the readiness to pay a certain price or amount of money. The price which a person actually pays for a thing measures its marginal utility to him. Marginal utility and price are closely connected with each other. Both would rise if the quantity were to decrease, both would fall if it were to increase. Value or price depends in this sense upon marginal utility. We can, however, equally well say that marginal utility depends upon value. If this value or price is high, smaller quantities would be purchased and marginal utility would be high. Similarly if the price were low, marginal utility would also be low. As a matter of fact both go together and are themselves influenced by the magnitude of the supply of a commodity in relation to the demand for it. All that we are entitled to say is that value or price tends to coincide with marginal utility.¹

§6. The marginal utility of money.—Money is also subject to the Law of Diminishing Utility, although the fall in its utility is slow and the point of satiety is very much more remote than in the case of an ordinary commodity; for money is not one commodity, but represents all the commodities it can buy. Every increase in the income of a person results in diminishing additions to utility or satisfaction. Those who possess very large incomes therefore have low marginal utility of money (i.e. the utility of goods purchased by the last addition to their income) as compared with those who have small incomes. Thus the marginal utility of a rupee to a person with Rs. 100 a month is higher than to a person with Rs. 1,000 a month. In the former case the last rupee stands for the satisfaction of more urgent wants than in the latter case. Similarly, the sacrifice of utility caused by equal diminution of income would be greater in the case of the poor than in the case of the rich, since in the former case some of the necessities of life would have to be sacrificed, while in the latter case comparatively less urgent wants would remain unsatisfied. This has a bearing on certain problems of taxation.²

§7. Law of Equimarginal Utility (Returns) or the Law of Substitution.—We have seen that according to the Law of Diminishing Utility every successive unit of a commodity yields less and less utility after a point. We should, of course, continue to consume each commodity so long as we derived

¹ This topic is discussed further in ch. ix.

² See ch. xvii.

some little utility from it, if we could have unlimited quantities of everything without any sacrifice. But most of the commodities we require cost effort to produce them and have therefore to be paid for. A millionaire may conceivably be in a position to carry the consumption of every single commodity to the point of complete satiety. But the great majority of us are not millionaires, and the problem for us is how to lay out a limited income on the numerous utilities that are offered for sale in the market. A sensible man thus circumstanced will carry the consumption of each article up to a point, i.e. until he feels that after that point the money he has still available would give more satisfaction if spent on something else. Guided by this consideration and comparing at every stage the relative utilities to himself of different things, he passes on from one commodity to another until the amount he can spend is exhausted. If on reviewing his expenditure he feels that he would have gained greater satisfaction by spending less on one thing and more on another, he regulates his expenditure accordingly in future. So far as we are consciously rational we endeavour to purchase such quantities of various things that the marginal utility of the money spent in each case is the same. We go on substituting one thing for another until we feel that this object has been achieved. This principle, which governs the conduct of every ordinarily reasonable person, is known in economics as the Law of Equi-marginal Utility (Returns) or the Law of Substitution.

Let us suppose a person has Rs. 9 and there are three commodities *A*, *B* and *C* on which he can spend it. For the sake of simplicity let us assume that the market price of all three is Re. 1 per unit. The utility of successive units of the three commodities for the person in question goes on diminishing in the manner represented by the curves in Fig. 2. Thus in the case of *A* the utility of the first unit is *cd*; the utility of the second is *ef*, and of the third *gh*. As the figures show, $gh = op = uv$. On these assumptions, the maximum satisfaction can be reaped by the person in question if he spends Rs. 3 on *A*, Rs. 4 on *B*, and Rs. 2 on *C*, because by so doing the marginal utilities are made equal ($gh = op = uv$). Any other way of distributing the available Rs. 9 would result in a decrease of satisfaction. Suppose, for example, that instead of buying 4 units of *B* and 3 units of *A*, 3 units of *B* and 4 units of *A* are bought. Then the additional (fourth) unit of *A* gives satisfaction *xy*, which is less than *op*, i.e. the satisfaction which could have been obtained *at the same expense* by buying the fourth unit of *B*. In ordinary life nobody

attempts to calculate in this precise manner the utilities of various things. Nevertheless we do find people weighing the

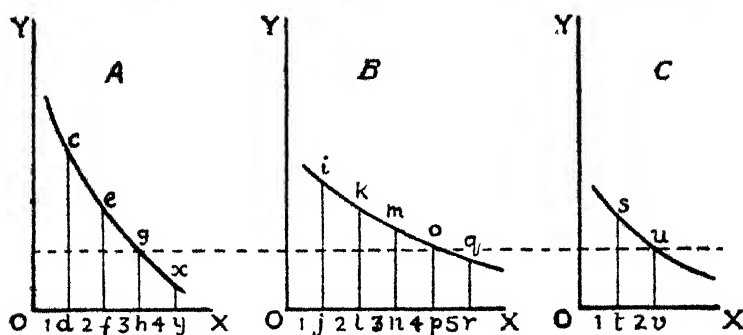


FIG. 2.—DIAGRAMMATIC ILLUSTRATION OF THE LAW OF EQUIMARGINAL UTILITY (RETURNS)

relative advantage of this or that mode of expenditure, spending more on one, less on another and in this manner trying to realize the maximum utility from a given limited income.

The principle of equimarginal utility also applies to the distribution of our income between current expenditure or present satisfaction and saving or future satisfaction (see §10 below). According to this principle the last rupee spent now and the last rupee saved have the same marginal utility. The principle is found to have an application in many other spheres besides that of ordinary expenditure. Take the case of a business man who owns a cotton mill. He has a certain limited amount of capital. He must spend some of it on labour and some on machinery. There is no fixed unalterable proportion between the outlay on these items, and each person has to find out the proportion which suits him best. When he is considering whether he had better utilize a given amount of money in employing additional labour or in buying such and such a new machine, the principle from which he is really seeking guidance is the Law of Equimarginal Returns or Substitution. This principle will be found to be in operation whenever there is a question of putting, not only money, but anything that is limited, to a number of possible uses. Suppose I employ a labourer at so much per day and can use him for domestic purposes as well as for work in my field. I use him for each of these purposes in accordance with the principle we are discussing.

It may be added that we are not concerned here with the question whether people *ought* to attach the relative impor-

tance to various desires that they do in fact attach. We take the intensities of people's desires and their personal estimates of the utilities of various things as we find them.

Lastly, it may be pointed out that as regards perhaps the most important part of their expenditure, people may feel compelled to follow the dictates of custom or fashion even against their own better judgement. Expenditure on marriage and other ceremonies in India and expenditure on clothes, especially women's clothes, in the west, are examples of this. In so far as people obey the dictates of society in these matters even against their will, the satisfaction or utility they derive from what they themselves consider as unreasonable modes of expenditure is of a negative character, namely an escape from social obloquy and criticism. But since we are concerned with the facts of people's preferences and not the motives for them, the exposition of the principle as given above may be allowed to stand.¹

§8. Classification of wants.—Wants (or the things that satisfy

¹ *Marginal Rate of Substitution* In recent economic analysis the principle of Diminishing Marginal Utility has been replaced by that of Diminishing Marginal Rate of Substitution, notably by J R Hicks and R G D Allen. This is justified on the ground that the new concept of the Marginal Rate of Substitution is a more precise and scientific quantitative concept than the old concept of Marginal Utility. Utility, being a psychological sensation, is essentially a subjective concept, it cannot therefore be measured quantitatively with any degree of precision. This applies to marginal as well as total utility. Nor, indeed is it necessary to measure utility absolutely, for the economic problem being one of choice and the relative scale (degree) of preference between two or more goods all that is necessary is to compare an additional unit of a commodity, say X, with that of another, say Y, at the margin. Suppose we start with a given quantity of goods, and then go on increasing the amount of X and diminishing that of Y in such a way that the consumer is left neither better off nor worse off on balance' (i.e. he is in a state of indifference), 'then the amount of Y which has to be subtracted in order to set off a second unit of X will be less than that which has to be subtracted in order to set off the first unit. In other words, the more X is substituted for Y, the less will be the marginal rate of substitution of X for Y' (The Marginal Rate of Substitution of X for Y may be defined as the quantity of Y which would just compensate the consumer for the loss of a marginal unit of X). This may be called the principle of Diminishing Marginal Rate of Substitution instead of Diminishing Marginal Utility. See J. R. Hicks, *Value and Capital*, pp 20-1. For a full discussion of relative scale of preferences see Wicksteed, *op cit*, pp 13-36.

The new principle, which may be presented as a theory of choice, has fruitful application to economic theory, particularly the advanced theory of value based on the concept of equilibrium and indifference curves.

them) are classified into (i) Necessaries, (ii) Comforts, and (iii) Luxuries.

(i) *Necessaries*.—We may take a rigidly narrow view of necessities, and include under the term only such things as are absolutely necessary for holding body and soul together (*necessaries for life*).

A broader view would include such additional things (*necessaries for efficiency*) as are required not only for bare existence but for maintaining efficiency, which would, for instance, mean sufficient food of reasonably nutritive value for the labourer and his family, satisfactory shelter and clothing, facilities for recreation, provision for sickness and old age, and opportunity for giving the labourer's children the training requisite to start them in life at least as well as himself.

Under *conventional necessities* we include items not strictly necessary for efficiency but on which expenditure is nevertheless incurred because it is dictated by social convention. In India important items under this heading are expenses on caste dinners, marriage and funeral ceremonies.

(ii) and (iii) *Comforts and Luxuries*.—Comforts and luxuries are terms which seem to explain themselves. The dividing line between comforts and luxuries is however not always clear. Whether a thing is a comfort or a luxury depends on how well-off a man is and what particular class of society he belongs to. To a poor peasant butter and ghee are luxuries. To the middle-class man on the other hand they are comforts (i.e. things which are conducive to wholesome existence and make for a decent standard of living), if not necessities. If an ordinary cultivator used scents (*attar*) they would be regarded as a luxury (i.e. a comparatively superfluous and expensive want) in his case; not so, however, in the case of a big zamindar.

The relative scale of importance implied in the classification of wants into necessities, comforts and luxuries, is found to be elastic in practice; and 'it by no means follows that this is the order in which these different classes of economic goods will be regarded in the minds of normal civilized men'.¹ Many a labourer in India, for example, would stint himself in the matter of food rather than forgo his customary indulgence in tobacco, *pan* and betel-nut.

The end of all economic activity is to provide mankind with the means of a happy and comfortable life. Civilized society in the west has outgrown the old Puritanic ideal

¹ Briggs and Jordan, op. cit., p. 28.

which appeared to exalt unpleasant labour for its own sake. Even in India, the notion that it is sinful for man to enjoy life is gradually losing its ascendancy over the minds of men, and we are beginning to recognize that it is perfectly legitimate for people to try to distil all the good that this earthly life is capable of yielding. In the name of common prudence it is of course important that everybody should try to keep his expenditure within the limits set by his income. But there is nothing wrong in a person aiming at as high a standard of comfort for himself as he dare. On the contrary it will make him exert himself strenuously to attain this standard. Such purposeful activity can in itself be a great source of enjoyment, and a country whose inhabitants show this restless ambition is likely to be wealthier and more progressive than another where the people are content with too little and are therefore supine, inert and lazy. The rapid increase in the wants of people is far from being an evil; it is indeed the first condition of economic progress. We must, however, not forget that true human welfare depends on the nature of the wants that may arise. These wants should be such as to make their satisfaction a means of raising mankind higher and higher in the scale of civilization. As knowledge grows and as the moral and aesthetic perceptions of people become more and more refined, they will learn to desire things which really serve to enrich and beautify life, and avoid those that degrade life and yield only a fleeting and frivolous kind of satisfaction. In India, at least as much as in any other country, there is urgent need for a popular awakening in this respect. The masses must be taught to feel the want of more things and better things—so that they will exert themselves to obtain them. Only thus can the country grow in wealth and provide the necessary conditions for a satisfactory existence for its people.

§9. Standard of living (or standard of comfort).—The aggregate of necessities, comforts and luxuries to which a class of people have been accustomed, is spoken of as their 'standard of living'. Wants when repeatedly satisfied over a sufficiently long period pass into habits, and the standard of life thus formed becomes characteristic of an individual and of the class to which he belongs. Different classes have different standards, and each one comes to look upon certain things as constituting the normal requirements of its everyday life. Each class strives to attain its particular standard, and having attained it to keep it up and if possible to raise it. The standard of life is not rigidly fixed. It varies not only from

nation to nation, from class to class, from individual to individual, but also from one period to another with the same individual or class or nation. Diverse forces, such as financial circumstances, habit, education, imitation—deliberate and unintentional—and ambition influence the standard of living.¹ Thus the present standard of living in England is much higher than it was in the eighteenth century, and is higher than in India today. The average English worker is accustomed to a certain standard in respect of food, clothing, housing, recreation, etc. He must appear in a particular style of Sunday clothes, must have his pipe and tobacco and newspapers to read, and he thinks he ought to be able to visit the cinema a certain number of times every month. By his desire to maintain this standard of living he is led to resist by organized action proposed cuts in his wages, or to enhance his efficiency, or again to restrict the size of his family. Thus the standard of living exercises a far-reaching influence upon the worker and has a deep social and national significance.

The standard of living in India is very low, especially in the rural areas. Though it is not possible to generalize owing to the great variety of standards of consumption, greatly influenced as they are in India not only by economic conditions but also by religion and caste, there can be no two opinions regarding the general low standard of living. Various intensive inquiries have been made in different parts of the country into the economic condition of villages, and different estimates have been made from time to time of the national wealth and the *per capita* income of India.² Also working-class budgets have been studied in industrial cities like Bombay.³ All the evidence thus collected confirms the impression that the standard of living of the masses in India is very unsatisfactory. The food eaten by the average Indian is not only inadequate, but it is poor in nutritious qualities. He is also badly clothed

¹ 'The standard of life of a class comprises the common habits of its members with reference to spending and working. Most of them tend to spend and work in pretty much the same way. Any two families of the same size with the same wage, if they work at the same trade in the same locality, will usually live similar lives. They will dress similarly, spend roughly equal amounts on rent and holidays, visit the same entertainments, despise the same things and reject the same food.' The despotism of the class idea ('public opinion') 'is beneficent in so far as it ensures a minimum of decency, culture and sociability, but maleficent if it suppresses all individuality and retards change for the better'.—S. J. Chapman, *Outlines of Political Economy*, p. 13.

² See our *Elements of Indian Economics*, ch. viii.

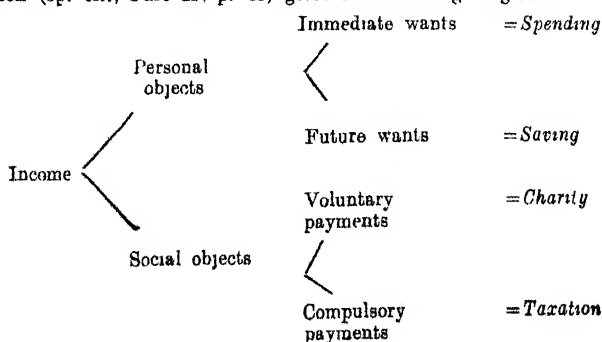
³ See §12.

and housed, badly taught and doctored. He knows hardly any luxuries except the luxury of extravagant expenditure on a few occasions in his life on marriages, pilgrimages and social feasts. But during the greater part of his life the bulk of his income is absorbed by the bare necessities of life. The ideas of people, especially of those living in towns, regarding the necessary minimum standard, are gradually changing under modern influences, and the desire to raise the standard is slowly becoming effective, although the prolonged economic depression, which fell with particular severity on primarily agricultural countries like India, has had the effect of checking the general improvement in the standard of living.

§10. Relation between saving and spending.—Spending means the application of income for the immediate satisfaction of our daily wants. In society as at present organized, most of our wants are satisfied through expenditure of income. But the whole of the income is not available for this purpose. In the first place, a part is required for social purposes, for voluntary payments by way of charity and compulsory payments by way of taxation. Also those who are able do generally save some of their income for the satisfaction of their future wants instead of spending it all on their immediate wants.¹

Unless people exercise such forbearance, and put aside a part of their income as provision for the future, they will suffer as individuals, as also will the society in which the large majority of people are reckless spendthrifts. In the economically advanced countries, these individual savings are in the first instance entrusted to banks. The banks lend them to industrialists and business men, in whose hands they are transformed into plant, machinery and other aids to further production of wealth. The capital equipment of society is thus maintained and enlarged.

¹ Person (op. cit., Part II, p. 48) gives the following diagram:



There is in reality no conflict between spending and saving; both enable us to satisfy our wants and add to our material welfare. Spending secures for us goods and services for the direct satisfaction of our immediate needs. Saving adds to the stock of production or capital goods and thus promotes the production of future wealth and satisfies our future wants. Saving and spending are thus complementary to one another. Both are essential for economic well-being and prosperity. If we recklessly spent all our income on the satisfaction of our immediate needs we should not be able to maintain, much less increase, our capital equipment, and there would be a deficiency of consumable goods in the future. If, on the other hand, we unduly stressed the importance of saving and stinted ourselves too much and added to the stock of machinery, raw materials and factories, we should soon find ourselves submerged beneath a flood of goods, for which there was no demand. The whole productive system would collapse in the absence of the stimulus of demand.

We need not, therefore, mark out either spending or saving for exclusive praise or exclusive condemnation. What is wanted is a proper proportion or balance between the two. Immediately after the war of 1914-18, saving rather than spending was necessary to repair its ravages and to revive the productive system. But apparently the process was carried to excess, and some economists hold the view that the world depression of 1929-33 was due to over-saving or under-consumption. Within proper limits, saving of course confers blessings both on the person who saves and on society, which benefits by adding to the stock of its capital goods and thus increasing its future wealth. Modern economists have learnt to emphasize the truth that all saving and no spending is bad for the individual as well as for society as a whole.

§11. Engel's Law of Family Expenditure.—Statistics of consumption by classes have received much attention in recent years. It is of some interest to ascertain the proportion in which the different classes of society distribute their expenditure between necessities, comforts and luxuries. In this connexion, we may mention the generalization known as Engel's Law. This law states that the smaller the income the larger the percentage of it spent on food and subsistence. Ernst Engel was a German statistician who lived about the middle of the nineteenth century; he studied a large number of family budgets (i.e. lists of items of the expenditure of families) of

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different classes of people in Saxony and constructed the following table :

Table illustrating Engel's Law

| Items of expenditure | Proportion of expenditure (to income) of the family | | |
|-------------------------------------|--|--------------|----------------------------|
| | Working (or poor) class | Middle class | Well-to-do (or rich) class |
| Food | 62 | 55 | 50 |
| Clothing | 16 | 18 | 18 |
| Lodging (rent) | 12 | 12 | 12 |
| Light and fuel | 5 | 5 | 5 |
| | <div> <div> <div>95%</div> </div> <div> <div>90%</div> </div> <div> <div>85%</div> </div> </div> | | |
| Education | 2 | 3.5 | 5.5 |
| Legal protection (taxation) | 1 | 2 | 3 |
| Care of health | 1 | 2 | 3 |
| Comforts and recreation | 1 | 2.5 | 3.5 |
| | <div> <div>5%</div> </div> <div> <div>10%</div> </div> <div> <div>15%</div> </div> | | |
| Total .. | 100 | 100 | 100 |

From these figures Engel concluded that as the income of the family unit increases :

- (i) the proportion spent on food decreases;
- (ii) the proportion spent on clothing remains approximately the same;
- (iii) the proportion spent on fuel, light and rent remains fairly constant; while
- (iv) the proportion spent on what may be called the comforts of life, such as education, health and recreation, tends to increase.

Thus the smaller the family income the greater the proportion of it absorbed by food and other elementary necessities (95% in the above example); and the greater the family income, the higher the proportion spent on comforts and luxuries (15% in the above example).

This law is also confirmed in a general way by the study of working class budgets in Bombay made by the Labour Office. The average income of the worker in India being very small, a very high percentage of it is spent on food and other necessities, and this percentage decreases with the increase in the size of the income. In the city of Bombay, for example, the expenditure on food varied in 1921-2 from 60.5%

in the case of incomes below Rs. 30 per month, to 52·6% in the case of incomes between Rs. 80 and Rs. 90 per month.¹ In countries with a high standard of living like England and the United States, a comparatively much smaller proportion of the wage-earner's income is absorbed by food and the other elementary necessities of life, and more is left over for conventional necessities and luxuries

§12. Family budgets.—In order to give the student some idea of a family budget, we give below (i) the average monthly budget of working class families in Bombay city for the period from May 1932 to June 1933, and (ii) the average annual budget of six tenant cultivators in the Lyallpur district (Punjab) in 1933-4

(i) *Average monthly budget of working class families
in Bombay city, 1932-3²*

| Items | Average monthly expenditure | Percentage to total |
|----------------------------------|-----------------------------------|------------------------|
| | Rs as ps | |
| Food | | |
| Cereals | 7 12 8 | 16 95 |
| Pulses | 1 1 9 | 2 41 |
| Other articles of food | 12 8 5 | 27 24 |
| Total expenditure on food | 21 6 10 | 46 60 |
| FUEL AND LIGHTING | 3 4 4 | 7 11 |
| HOUSE RENT | 5 14 3 | 12 81 |
| CLOTHING | 3 3 8 | 7 03 |
| UMBRELLAS | 0 2 0 | 0 27 |
| SHOES OR SANDALS | 0 3 4 | 0 45 |
| BEDDING | 0 0 2 | 0 02 |
| HOUSEHOLD NECESSARIES | 0 0 10 | 0 11 |

¹ G. Findlay Shirras, *Working Class Budgets in Bombay* (Bombay Labour Office), 1923

² The Bombay Labour Office conducted a working class Family Budget Inquiry during the course of which 1,469 family budgets were collected. The period covered by the inquiry was from May 1932 to June 1933. The average number of persons per family was 3·70—*Report on an Enquiry into Working Class Family Budgets in Bombay City* (1935)

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(i) *Average monthly budget of working class families in Bombay city, 1932-3—(contd.)*

| Items | Average monthly expenditure | Percentage to total |
|--|-----------------------------|---------------------|
| | Rs. as. ps. | |
| MISCELLANEOUS | | |
| Barber | 0 13 9 | 1.87 |
| Dhobi or soap | 0 9 3 | 1.26 |
| Hair oils | 0 2 8 | 0.36 |
| Medical fees and medicines | 0 3 1 | 0.42 |
| Pansupari | 1 9 6 | 3.47 |
| Chewing tobacco | 0 2 6 | 0.34 |
| Bidis and cigarettes | 1 5 11 | 2.08 |
| Liquor | 1 3 8 | 2.67 |
| Toddy | 0 7 7 | 1.03 |
| Amusements | 0 2 0 | 0.27 |
| Bangles and combs | 0 2 2 | 0.30 |
| Postage | 0 1 11 | 0.26 |
| Travelling to and from native place | 1 11 2 | 3.69 |
| Payments to dependents | 2 1 11 | 4.61 |
| Newspapers | 0 1 4 | 0.18 |
| Sundries | 0 13 11 | 1.89 |
| Total miscellaneous . | 11 12 4 | 25.60 |
| Total expenditure ... | 45 15 9 | 100.00 |

(ii) *Average (annual) family budget of six tenant cultivators in the Lyallpur District (Punjab), 1933-4¹*

| Items | Average per family | Average per adult unit | Percentage to the total |
|--------------------------------|--------------------|------------------------|-------------------------|
| | Rs. as. ps. | Rs. as. ps. | |
| Housing (repairs done) | 1 6 3 | 0 3 9 | 0.3 |
| Food | 313 8 1 | 52 11 1 | 67.9 |
| Fuel | ... | ... | ... |
| Dress | 75 10 8 | 12 11 6 | 16.4 |
| Medicine | 4 10 1 | 0 12 5 | 1.0 |
| Light | 5 8 5 | 0 14 10 | 1.2 |
| Education | 1 3 10 | 0 3 4 | 0.3 |
| Religion | 11 4 8 | 1 14 4 | 2.4 |
| Travelling | 27 2 0 | 4 8 11 | 5.9 |
| Social functions | 9 0 6 | 1 8 4 | 2.0 |
| Amusements and luxuries | 3 13 5 | 0 10 4 | 0.8 |
| Miscellaneous | 8 8 3 | 1 6 11 | 1.8 |
| Total expenditure ... | 461 12 2 | 77 9 9 | 100.0 |

¹ *Family Budgets 1933-4 of Six Tenant Cultivators in the Lyallpur District* (The Board of Economic Enquiry, Punjab, 1935).

The budget of the Lyallpur cultivator relates to the period 1 June 1933 to 31 May 1934. There were on an average 8.2 members per family.

Food is the largest item of expenditure as it comprises 67.9% of the total domestic expenditure. The second most important item is dress (16.4%). Travelling, religion, social functions, medicine, light, amusements and luxuries form 5.9%, 2.4%, 2.0%, 1.0%, 1.2% and 0.8% respectively. Last come housing and education, each accounting for 0.3% of the total expenditure. Housing includes the cost of repairs and furniture made during the year, and of petty articles of furniture purchased, but does not include the rent or depreciation on the value of the houses which are provided to their tenants free of cost by the landlord. Education is one of the smallest items of household expenditure, and forms only 0.3% of the total.

59.0% of the goods consumed were furnished by the farm and 41.0% bought from outside. 81.4% of the food and 11.2% of the dress material were produced on the farm.

Articles used as fuel by the families are loppings from trees, cotton sticks, dung cakes. The tenants get loppings of trees free of charge. Cotton sticks have no market value. As the value of the manure produced by cattle has not been deducted from the cost of their upkeep it is not proper to count it in the household expenditure.

§13. **Consumer's surplus.**—Marshall explains the idea of consumer's surplus in the following words: "The benefit which a person derives from purchasing at a low price things for which he would rather pay a high price than go without, may be called his Consumer's Surplus." This doctrine is based on the distinction between total utility and marginal utility as already explained. We know that at any given time there is some fixed price at which an article, say tea, is selling. Now suppose the current price is Re. 1-8 per lb. At this price everyone will buy as much as will suit him. Let us suppose that a purchaser X buys 6 lb. at this price. But it has already been made clear that although each unit that is consumed costs the same price, the satisfaction derived from them is not the same. The earlier units yield higher satisfaction than the later. For the earlier units X would have paid more than the price of Re. 1-8 per lb. Since he stops his purchase of tea after the sixth unit, this unit was just worth Re. 1-8 to him and no more. Therefore this unit did not yield him any

* *Elements of Economics of Industry*, p. 420.

surplus satisfaction. There *was* such a surplus however on the earlier units, and this is his consumer's surplus, i.e. the excess of what he would willingly have paid if necessary, and what he actually does pay or, as Taussig expresses it, 'the difference between the potential price and the actual price'.¹

In Fig. 3 the position is that to obtain 1 lb. of tea our purchaser would really be willing to pay Rs. 4 rather than

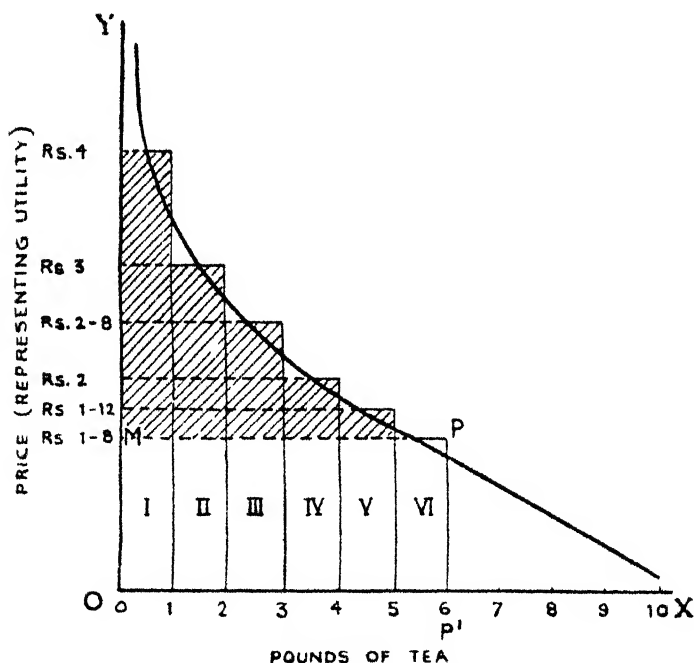


FIG. 3.—DIAGRAMMATIC REPRESENTATION OF CONSUMER'S SURPLUS

go without it altogether. Rs. 4 measures the total utility of the first pound and it is represented in the diagram by rectangle I. For the second pound he would be willing to pay Rs. 3, or, what amounts to the same thing, if the price were Rs. 3 he would be just induced to buy 2 lb., and so on. Now suppose the price had fallen to Re. 1-8 per lb., then he would be induced to buy 6 lb., all at the same price of Re. 1-8. In that case he obtains a consumer's surplus on all the pounds of tea except the sixth, which is on the margin. Thus on the first pound he obtains a surplus measured by Rs. 4

¹ F. W. Taussig, *Principles of Economics*, 3rd ed., vol. I, p. 125.

(potential price) *minus* Re. 1-8 (actual price) = Rs. 2-8; and on the second, Re. 1-8; on the third, Re. 1; on the fourth, As. 8; on the fifth, As. 4; on the sixth he gets no surplus, as previously explained. The aggregate consumer's surplus for 6 lb. is therefore Rs. 5-12-0. This is equal to the aggregate potential price (Rs. 14-12-0) measuring the total utility of 6 lb., *minus* Rs. 9, i.e. the price actually paid for 6 lb. ($6 \times$ Re. 1-8). The total surplus is represented in the diagram by the shaded portion, the unshaded area OMPP' standing for the total exchange value or price paid for the aggregate supply of six pounds. The surplus satisfaction in the case of each of the first five pounds is represented by the shaded portion of rectangles I, II, III, IV and V respectively. Rectangle VI, which represents the utility of the sixth (marginal) pound, has no shaded portion since there is no surplus satisfaction derived from it by our consumer.

It is easy to think of illustrations from practical life. For example, before the war of 1914-18 we had to pay four annas for a copy of the *Times of India*, but until recently we could buy it for an anna. Those of us who bought the paper before the last war and continued to buy it therefore enjoyed a surplus satisfaction of at least three annas. Again, we can write a letter to a friend, say in Delhi, at the cost of an anna and a half, although we would perhaps be willing to pay as much as six annas for doing so if necessary. We thus reap a surplus of As. 4½. Obviously in the case of many of the common comforts of life, such as railway facilities, bus journeys, books and sugar, most purchasers enjoy a considerable consumer's surplus.

We must, however, bear in mind certain limitations of the doctrine of consumer's surplus. It is valid enough as a general concept and corresponds to our daily experience. But the difficulty arises in measuring it accurately in terms of money.¹ In the first place, an equal amount of money does not measure an equal amount of satisfaction to rich and poor alike. The payment of a high price in the beginning by the rich for something that may later be purchased at an appreciably lower price by the poor (say, mangoes at the beginning of the mango season when they are expensive, and in the

¹ For detailed criticisms of the doctrine, see Nicholson, *op. cit.*, vol. I, pp. 58-65 and Taussig, *op. cit.*, pp. 125-9. See also Marshall, *Principles of Economics*, pp. 128-34. For more recent criticisms see F. H. Knight, *Risk, Uncertainty and Profit*, and Roll, *op. cit.*, pp. 79-81. The trend of modern criticism is that utilities are not quantitatively measurable and cannot be translated into monetary terms with numerical precision. We cannot really go beyond comparing utilities and arrange them in a scale of descending order.

full swing of the season when they are cheap) does not indicate a higher consumer's surplus to the rich, but rather a lower marginal utility of money to them. Secondly, in the case of articles like diamonds possessing scarcity or prestige value and therefore satisfying the love of *distinction*, consumer's surplus seems to be unreal or unsubstantial, since it would disappear if diamonds were to become abundant and cheap; for in that case rich people would cease to prize them and would not buy them. Thirdly, in the case of a minimum quantity of indispensable necessities of life like bread, consumer's surplus is incalculable, since its utility is indefinite or infinite. A person would be prepared to part with his whole fortune if necessary in order to secure the minimum necessities of life. We cannot therefore really measure it. Lastly it is never possible precisely to measure consumer's surplus, since we can have no accurate knowledge of the potential prices that would be paid for the several instalments of a commodity. We can of course restrict ourselves to the demand schedule of prices which are more or less customary. But this cannot give us a full measure of the consumer's surplus.

The doctrine of consumer's surplus has considerable practical utility when making comparisons of life in two places, and in the case of problems concerning the higher uses of wealth, fixation of monopoly price and taxation of commodities. For example, as Marshall points out, a man with £1,000 a year in Central Africa is not so well off (does not enjoy the same consumer's surplus) as a person with £400 a year in England, for although things which money will buy in Central Africa will be as cheap there as in England there are so many things which cannot be bought in Central Africa at all. Thus people living in more civilized regions enjoy greater amenities of life and command a greater consumer's surplus, i.e. more material well-being, than those living in backward tracts. The doctrine of consumer's surplus also indicates the margin available to the monopolist for raising prices and to the state financier for levying taxes on goods without unduly trenching on the consumer's surplus derived from the goods concerned.

§14. Demand.—By demand we understand in economics not merely desire but *desire backed by the necessary purchasing power*. A pauper's desire for a Rolls-Royce motor car will not act as a stimulus to the production of these cars. In order that demand should not be confused with mere desire

the more explicit phrase 'effective demand' or 'efficient demand' is often used.

§15. The Law of Demand.—The so-called Law of Demand or Demand Price is merely a corollary from the Law of Diminishing Utility, and it may be expressed as follows: *when the price falls demand expands, and when the price rises demand contracts.* The fall in price must correspond to diminished utility, which results from increase in quantity. The rise in price must correspond to increased utility, which results from decrease in quantity.

Another way of expressing the same idea is to say that a larger quantity can only be disposed of if the price is lower, the decline in price measuring the diminution in utility; or a smaller quantity can be disposed of at a higher price, the rise in price measuring the increase in utility.

§16. Demand Schedule and Demand Curve.—If we put prices on one side and place against them the respective quantities that can be sold at those prices, we get what is called a Demand Schedule.

*Market Demand Schedule
with a class of 'very rich' men (say, 5 in every 100
of population)*

| Price per lb of sugar | Quantity demanded in the market | Quantity demanded by 'very rich' men |
|--------------------------|------------------------------------|---|
| As. | lb. | lb. |
| 16 | 50 | 50 |
| 14 | 60 | 50 |
| 12 | 80 | 52 |
| 10 | 130 | 55 |
| 8 | 200 | 57 |
| 6 | 300 | 60 |
| 4 | 500 | 62 |
| 3 | 700 | 63 |

In the above table, the influence of changes in price on market demand has been studied. Such a table is known as the Demand Schedule.¹ It may be drawn for an individual or for a particular class or for the whole market. The market

¹ The transition from Individual Demand Schedule to the Market Demand Schedule is clearly explained in Todd, *op. cit.*, pp. 117-8.

or group demand schedule represents the net combined result of a number of individual demand schedules and is more steady and dependable than the latter, the individual peculiarities of different consumers being largely cancelled one against the other in the aggregate demand schedule. We find in our schedule that as the price falls, demand increases; while as the price rises, demand falls. In the third column the influence of changes in price on the richest class in society is studied. It shows that at the highest price only this class would make any demand, and that as price falls there is no appreciable increase in the amount demanded. Thus the demand on the part of the rich is inelastic as compared with the more elastic group demand, which reacts more readily to price changes.

We may now proceed to draw what is called a demand curve based on the above demand schedule (see Fig. 4). Along

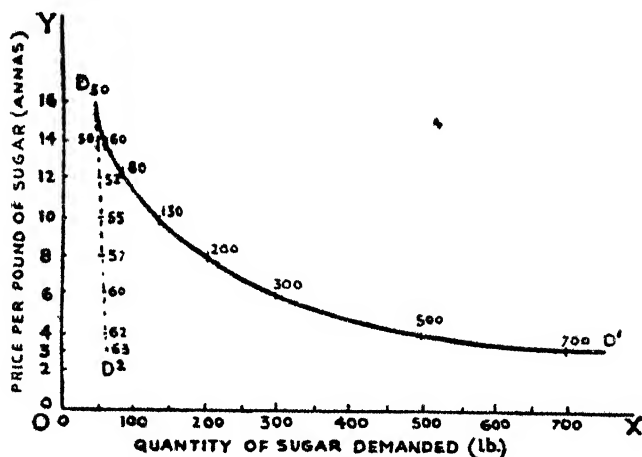


FIG. 4.—DEMAND CURVE

the horizontal axis OX are marked quantities demanded, while on the perpendicular line OY are marked the various prices for pounds of sugar. If we have a number of such price quotations and the corresponding quantities demanded at those prices we shall be able to mark a number of points, by joining which we get our 'Demand Curve' (DD¹ in the diagram), showing a gradual and steady decline in prices accompanied by an increase in the quantity demanded.¹ Thus as a result

¹ It may be mentioned here that 'most demand curves slope downwards to the right throughout their length, although the slope may be much steeper

of the fall in price from 16 annas to 3 annas the quantity demanded increases from 50 to 700 lb. The dotted curve represents the inelastic demand on the part of the 'very rich'. The same drop in price (namely from 16 to 3 annas) does not induce them to increase their purchases appreciably, the quantity demanded increasing only from 50 lb. to 63 lb. This inelastic demand is illustrated by DD^2 showing a sharp decline.

As remarked above, demand means effective or efficient demand. It means the quantity that is taken by purchasers at a given price. Or perhaps it is even better to say that the demand for a particular commodity means the whole range of prices with the quantities going with each of those prices. The question 'What is the demand for such and such a thing?' is best answered by setting out its demand schedule or plotting it as a curve.

§17. Elasticity of demand.—Every commodity obeys the Law of Demand as stated above, that is its demand expands with a fall in price and contracts with a rise in price. But this variation of demand following on variation in price occurs more readily in the case of some commodities than in that of others. In the former case we say that demand is comparatively more *elastic*; and in the latter, comparatively less elastic, or *inelastic*. *Elasticity of demand may be defined as the degree of response (in the form of variations in the quantity demanded) to changes in price. When a small decrease in price causes a considerable increase in the quantity demanded (or a small increase in price causes a considerable decrease in the quantity demanded), the demand for that commodity is said to be elastic. When a considerable change in price is required to produce an appreciable change in quantity demanded, the demand for that commodity is said to be inelastic.* Strictly speaking, we ought to speak of demand being 'relatively more elastic' and 'relatively less elastic', rather than elastic and inelastic. For, since every commodity is subject to the Law of Demand, the demand for no commodity can be said to be absolutely inelastic, in the sense that no change of price, however great, causes any change whatever in the quantity of it that is demanded. For the sake of brevity and convenience we often do actually use the handier expressions 'elastic' and 'inelastic', and there is no great harm

in some parts than in others. This means that unless something happens to change the demand, more will be bought at any given price than at any higher price.' F. Benham, *Economics*, p. 48.

in doing so provided we understand clearly that it is all a question of degree.

§18. **Rules regarding elasticity of demand.**—*In the case of necessities, elasticity is generally small, since whatever the price, people must have enough; and when they have had enough, they do not want very much more even if there is a considerable drop in the price. Demand is elastic in the case of luxuries, because they are not urgently required; people can increase or decrease their consumption of them according as prices fall or rise (see Fig. 5).*

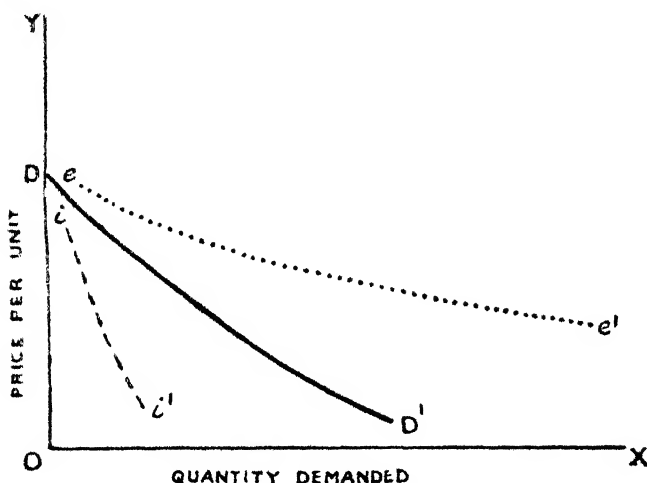


FIG 5.—DIAGRAM SHOWING ELASTIC AND INELASTIC DEMAND¹

DD'.—DEMAND CURVE SHOWING DIMINISHING UTILITY

ee'.—ELASTIC DEMAND FOR LUXURIES

ii'.—INELASTIC DEMAND FOR NECESSARIES

We have already seen how what is a luxury to one set of people may be regarded as a necessary by another set. It follows, therefore, that the *same commodities may show different elasticity from one group of people to another* according to differences in financial position. The clearest notion of elasticity is therefore obtained by considering each class by itself.

When prices are very high, demand is usually inelastic. Because then only the very rich can afford to buy the commodity and in their case even considerable changes in price do not cause appreciable changes in the quantity demanded.

¹ See Taussig, op cit, vol. I, p 136.

When prices are very low, demand is similarly inelastic. Because the low prices enable people to consume the commodity practically up to the point of satiety, and so long as prices remain low on the whole, little variations in them do not much matter (see Fig. 6).

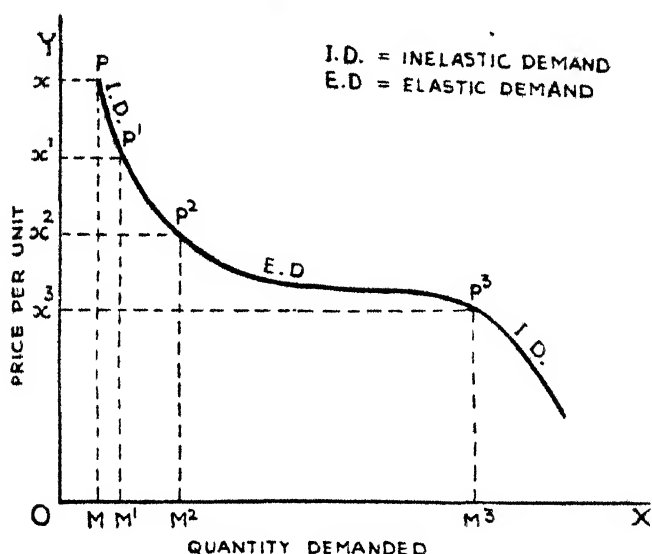


FIG. 6.—DEMAND CURVE SHOWING INELASTICITY OF DEMAND AT VERY HIGH AND AT LOW PRICES, AND GREATER ELASTICITY AT INTERMEDIATE LEVELS AS INDICATED BY THE GENTLER SLOPE. THE GREATER THE INELASTICITY THE STEEPER THE SLOPE

$$xx^1 = x^1x^2 = x^2x^3$$

AT PRICE PM , QUANTITY OM IS DEMANDED

AT PRICE P^1M^1 , WHICH IS LESS THAN PM BY xx^1 , DEMAND INCREASES ONLY BY MM^1

AT PRICE P^2M^2 , WHICH IS LESS THAN P^1M^1 BY x^1x^2 , THE INCREASE IS GREATER, NAMELY M^1M^2

AT PRICE P^3M^3 , WHICH IS LESS THAN P^2M^2 BY x^2x^3 , THE INCREASE OF DEMAND IS VERY MUCH GREATER, NAMELY M^2M^3

It thus follows that the more equal the distribution of wealth, the greater the elasticity of demand.

Demand is more elastic when there are substitutes than otherwise. Thus increase in railway fares will decrease the

demand for railway service. But this will happen more rapidly if there are substitutes like motor buses.

Demand is more elastic when a commodity is put to several uses of differing urgency than if confined to a single use (e.g. coal or rubber). As prices change, the commodity is readily extended to or withdrawn from the less urgent uses.

§19. Measurement of elasticity.—In order to give a precise significance to the idea of elasticity, we say that *elasticity=1 (unity), if a given change in price is followed by an exactly inverse proportionate change in quantity; if the change in quantity is less than proportionate, elasticity is less than 1; if more than proportionate, it is more than 1.* Suppose prices are halved and the quantity sold is exactly doubled, then elasticity=1. If the quantity is less than doubled, elasticity=less than 1. If the quantity is more than doubled, elasticity=more than 1.

§20. Changes in demand.—We may conclude this chapter with a brief consideration of the factors which bring about a change in the state of demand (i.e. increase or decrease of demand) for particular goods or commodities in general. independent of changes in price.

In the first place, changes in taste and fashion are responsible for changes in demand, e.g. while the increasing taste for motor-cars has increased the demand for them it has reduced the demand for horse-drawn carriages. The vagaries of women's fashions are well known.

Secondly, demand is influenced by changes in weather and seasons, e.g. the demand for cold drinks is greatly increased in the hot season and reduced in the cold season.

Thirdly, changes in the size of the population produce changes in demand. A rapid growth of population due to a higher birth-rate will call for increased quantities of the necessities of life and particularly increase the demand for things wanted by children and young persons, while the opposite will be the case when a country's population is declining.

Fourthly, changes in the amount of the real income (consisting of goods and services available for consumption) per head of the population due to improvements in technical knowledge may influence demand, e.g. an increase in the average real income may increase the demand especially for what may be called comforts and luxuries.

Fifthly, the state of trade affects the demand for goods. Thus the demand for most goods, especially producer's goods, increases in a boom period and decreases during a trade depression.

Sixthly, changes in other prices may affect the demand for a particular commodity, especially when goods are fairly close substitutes or are jointly demanded. Thus a rise in the price of tea would tend to increase the demand for coffee, while a fall in the price of motor-cars may not only increase a demand for them but also for petrol.¹

It is obvious that changes in the state of demand, i.e. an increased or decreased demand for goods, make it necessary to replace the old demand schedules showing the relation between prices and quantities demanded at those prices. Thus increase in demand would mean that more would be demanded at old prices, while a decrease in demand would mean that less would be demanded at old prices. It would also be necessary to redraw the demand curves.

SUMMARY

Consumption is the end of all economic activity. Production being the means and consumption the end, production may be said to be subordinate to consumption. If we allow production to fall out of step with consumption, there is loss to producers or inconvenience to consumers.

Human wants in general are insatiable. But each single human want is satiable.

Some wants are complementary, i.e. they can be satisfied only by two or more things being provided together.

Many human wants are alternative and competitive, i.e. they can be satisfied equally well by this or that other thing.

Recurrence of wants is another notable characteristic of human wants. The satiability of every single want is at the basis of the *Law of Diminishing Utility*—which states that, *after a point*, every addition to the stock of any useful thing yields less and less satisfaction. (We assume that the intervals between the additions are quick and that the consumer's tastes or preferences do not undergo a fundamental change.)

Total utility means the aggregate utility derived from the consumption of the whole of a stock of similar goods. *Marginal utility* means the utility lost if one unit of the stock is lost or—which comes to the same thing—it is the utility of the unit consumed last. The marginal unit, however, is not fixed unalterably: it depends on the quantity consumed, which varies according to price and also according to intensity of demand. The utility of every unit considered as part of a given aggregate is the marginal utility. Value is the expression of marginal utility.

Most of us have limited incomes to be spent on a large variety of goods. A wise man under these circumstances orders his expenditure in such a manner that he does not feel he has spent too much on one thing and too little on another. In technical language this is expressed by saying that he tries to observe the *Law of Equimarginal Utility or Returns*.

In its more general application than in the regulation of ordinary personal expenditure, this law is known as the *Law of Substitution*.

¹ For a detailed study of this subject see Benham, op. cit., pp. 68-78.

By following the Law of Equimarginal Utility or Returns, or the Law of Substitution, the object achieved is the highest total satisfaction from a given outlay according to each person's individual scale of values.

In recent economic analysis the principle of Diminishing Marginal Utility has been replaced by that of Diminishing Marginal Rate of Substitution and it is particularly useful in advanced theory of value.

Wants are classified into *Necessaries*, *Comforts* and *Luxuries*. Each of these terms is elastic as to what kind of consumption it is to include. The term 'necessaries' for example is capable of a very rigorous or a very liberal interpretation. A liberal interpretation would include a number of things over and above what is required for bare existence.

Conventional necessities are those which, while not necessary for efficiency, are imposed by social convention.

'Comfort' and 'luxury' are terms whose meaning will obviously vary in accordance with the class in society to which a person may belong. To aim at a high standard of life is not only not wrong, but it is actually a necessary condition of economic progress. The low standard of life with which the masses in India are content is one of the causes of their poverty. While it is necessary for economic progress that wants should increase, these wants should be such as ennoble and do not degrade human life.

The aggregate of necessities, luxuries and comforts to which any class of people has become accustomed is its *standard of living*. It varies from individual to individual, class to class, and nation to nation. It also varies from period to period for the same people. Desire to maintain one's standard of life has far-reaching influences on efficiency and on the worker's reactions to any given wage policy. The standard of living among the people of India is showing some signs of rising, which should make for greater economic efficiency and economic welfare.

Both *spending* and *saving* are necessary for economic health and stability. All spending and no saving will lead to deterioration and ruin of the capital equipment of society and must ultimately react disastrously on production. All saving and no spending means that there is no demand for the products of industry. It also means that production would ultimately cease. There was a tendency in the old days to exalt saving as a supreme virtue and to regard spending as a thing to be deprecated. Modern economists have restored the balance by emphasizing the necessity of spending as well as of saving. The two processes are not opposed, but complementary to each other.

A study of the family budgets of different classes of society has given rise to the generalization known as *Engel's Law*, which states that the smaller the family income, the larger the proportion of it spent on food and other elementary necessities of life, and the higher the family income, the greater the proportion of it spent on comforts and luxuries. Figures from family budgets illustrate this generalization.

Consumer's surplus can be defined simply as the difference between what a consumer actually pays for a thing and what he would have been prepared to pay rather than go without it. It measures the difference between marginal and total utility. Consumer's surplus is a real phenomenon, though

it is impossible to calculate the exact size of it in any given case. The conception is inapplicable in the case of things whose value depends on their remaining scarce, and when we are considering the utility of a certain *minimum quantity* of an absolute necessary of life. Another complication is that equal amounts of money mean unequal amounts of satisfaction to the rich and the poor. In spite of these difficulties, however, the doctrine is of practical usefulness in comparing life in two different places, in questions of taxation, and questions relating to the most advantageous price for a monopolist.

Demand in economics means desire supported by the purchasing power necessary to satisfy it—in other words, efficient or effective demand.

Law of Demand.—When price falls, demand expands; when price rises, demand contracts.

This law is a corollary from the Law of Diminishing Utility.

The reaction of demand to changes in price can be shown either by means of a *Demand Schedule*, or a *Demand Curve*.

Elasticity of demand means the degree of change in quantity demanded in response to change in price.

If even a slight change in price causes a big change in demand, demand is said to be *elastic*.

If even a very considerable change in price causes only a comparatively small change in demand, demand is said to be *inelastic*.

Since all commodities obey the Law of Demand, the demand in each case shows some elasticity. The difference between one commodity and another is only as regards the degree of elasticity.

Elasticity is small in the case of necessities, the demand for which is, therefore, said to be inelastic.

Elasticity is considerable in the case of luxuries, the demand for which is, therefore, said to be elastic.

Elasticity varies not only from commodity to commodity but also from one class of purchasers to another.

As a general rule, demand is inelastic when prices are very high or when they are very low. Equality of wealth-distribution favours elasticity.

Among other things favourable to elasticity of demand are presence of substitutes and also employment of a commodity for several purposes of varying urgency.

Measurement of elasticity of demand.

(i) Elasticity is equal to 1 (unity).

(ii) Elasticity is less than 1, or

(iii) Elasticity is more than 1,

according as the response to changes in price is respectively

(i) exactly proportionate,

(ii) less than proportionate, or

(iii) more than proportionate.

Demand may increase or decrease owing to factors other than changes in prices of goods. These factors include changes in fashion and taste, in seasons, in population, in the amount of real income per head, in the state of trade and in other prices. These changes necessitate a recasting of the old demand schedules and the redrawing of demand curves.

Y

PRODUCTION : LAND

§1. **Meaning of production.**—Every activity which results in the creation of *wealth* as defined above¹ is to be regarded as productive. *Production may be defined as the creation or addition of utilities or values.* By the exercise of productive activity something that has exchange-value comes into existence.

In the production of material wealth, there is of course no question of creating new matter. This is something which man cannot do. At the most he can rearrange and combine particles of matter and give them a form which has a greater value for human purposes than they possessed before. Thus he puts together brick and mortar so that he gets a house; or joins together pieces of wood so that he gets a piece of furniture. This type of production is described as the *creation of form utilities.*

Another type is the *creation of place utilities.* The trader's function consists essentially in taking commodities from places where they are comparatively plentiful and have therefore relatively small utility or value to places where they are less abundant and have therefore greater value. The trader by his activity *adds to the value* of things and has as great a title to be considered a productive worker as, let us say, a labourer in a coal-mine, who takes coal out of the bowels of the earth, where it was useless to human beings, and brings it up to the surface where it becomes available for human uses.

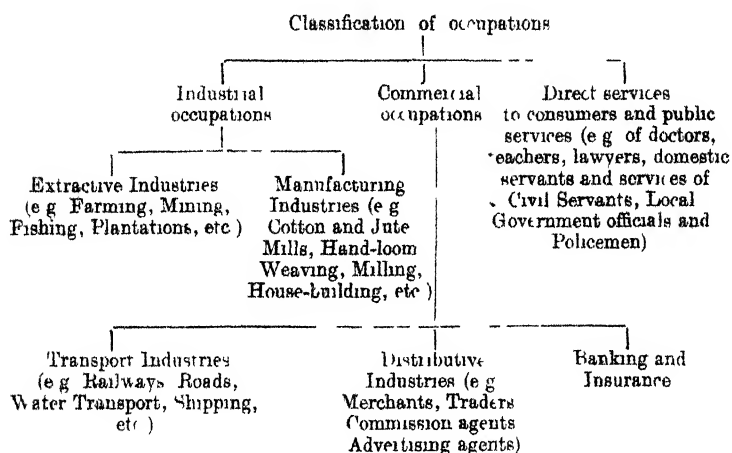
Production may also consist of the *creation of time utilities.* The actual supply of commodities like grain and fruit is limited to a certain period in the year, whereas the consumption of them is not so limited. Storing or preserving these things and carrying them over from periods of plenty to periods of scarcity is undoubtedly an important form of wealth production.

The processes in *immaterial production* are, first of all, **endowing** persons with the necessary skill and powers (so far as these are capable of being acquired), and secondly, the **release** by persons thus endowed of the different forms of

¹ See ch. iii, §2.

non-material wealth, i.e. services, like professional services, recreative services and domestic services.

§2. **Classification of occupations.**—The various occupations arising out of the different kinds of wealth-production (or productive activity) may be grouped as follows ¹



§3 **Productive and unproductive labour.**—We may here briefly refer to the controversy, at one time acute, regarding what is productive and what is unproductive labour

The French economists of the eighteenth century, the Physiocrats, held that labour devoted to extractive industries like agriculture, mining etc. was alone productive. Their idea was that nature co-operated with man in a very special manner in these extractive industries and created a *net product*. Adam Smith admitted the production of manufactures to the category of productive labour. But labour devoted to transport and trade was for a long time held to be unproductive, and even today, perhaps in the minds of some people, there is a prejudice against the mercantile classes. The contention was that transport and trade did not create any *new* wealth, but dealt only with wealth already created. But we have already seen how modern economists have widened the connotation of the term 'wealth' by recognizing certain place and time utilities to be wealth. The transport services are essentially productive since they endow things with place utility. So also the labour of the commercial classes is fundamentally productive, since merchants direct

¹ S. E. Thomas, *Elements of Economics*, 5th ed., p. 64

the movements of commodities, store and hold them over until they are required by consumers (i.e. endow them with time utilities); and sometimes they may be said even to *create* form utilities, e.g. by sorting out and selling goods in convenient lots as required by the consumers. Even when commerce is reduced to the mere act of exchange it is productive, since production is not complete until the commodity is placed in the hands of the consumer. ✓

For a long time it was similarly held that the labour of servants, soldiers, judges, sailors, actors and the professional classes (in fact all labour in the form of personal or non-material services) was unproductive, and whole classes of the community were stigmatized as economically sterile. This view led to many absurdities. For instance, the labour of the fiddle-maker was considered productive, but that of the musician who played on it was held to be unproductive. The fundamental test obviously is whether human wants are satisfied by the utilities in question irrespective of the source whence they flow. Services which have to be paid for, if they satisfy our wants, are wealth as much as material goods or vendible commodities. Nor is it necessary that the utilities should yield direct satisfaction. For example, the labour of the soldier, the policeman, or the judge, by promoting security of life and property, enables wealth or direct utilities to be created, and therefore is itself productive. ✓

The controversy between productive and unproductive work appears to be pointless in view of the Robbinsian definition of economics as the science of the disposal of scarce goods with alternative uses. From this point of view all labour which attempts to overcome scarcity is productive. 'The services of the cinema star and baker are reduced to a common denominator. Both services command a price . . . because they are relatively scarce in relation to demand.'¹ It may be pointed out here that there is no moral significance attaching to work or labour. Thus the work of opium or liquor manufacturers is productive because it possesses utility in the economic sense and is paid for, although the consumption of such noxious goods may be highly undesirable.

But the question now arises, is any labour unproductive at all? In a certain number of cases a definite affirmative reply can be given. For example, labour is unproductive if it fails in its purpose and represents effort that is wasted (e.g. in building a capital city in a desert area uninhabitable

¹ Briggs and Jordan, *op cit*, pp 130-1.

by human beings). Secondly, the labour of burglars, swindlers and pirates is purely predatory, and is clearly unproductive. There are, however, certain kinds of labour which call for some discriminating judgement. For example, the labour of business men, including speculators and company promoters, is not necessarily unproductive. When honestly and capably performed it is of the highest value to the community. But sometimes their operations are of a predatory nature or degenerate into mere reckless or unscrupulous gambling and are intended to deceive innocent investors and then they must certainly be regarded as unproductive. ✓

§4. Factors or agents of production.—According to the classical tradition there are three factors or agents of production, namely land (materials and powers of nature), labour and capital. Following the growing specialization of processes and functions, a fourth factor of production, namely organization or enterprise (supplied by the entrepreneur) was added, its importance being particularly stressed by Marshall. This addition was also designed to refute the theories of Karl Marx who attributed the entire value of a product exclusively to labour.

The four factors of production may in the last resort be reduced to only two, namely land (nature) and labour (man) which may be regarded as the primary factors of production as they constitute the basis of economic activity. Capital, which consists of producers' goods, such as tools and machinery, and is intended to help labour in its task of producing wealth, is itself compounded of land and labour. Organization is, after all, a special form of human labour.¹ However, leaving aside the question of ultimate origin, there is sufficient difference in character between the four factors to justify our treating them separately.

§5. Objections to the traditional categories of factors.—This traditional classification of factors of production has been criticized by modern writers² on the ground that it is arbitrary and that the differences between the factors are technological (physical) rather than economic. Firstly, each of these factors is diverse in character and capable of minute sub-division: thus land shows gradations of quality, as do labour and capital. Secondly, land cannot be readily distinguished from

¹ On this point the reader may consult K. Wicksell, *Lectures on Political Economy*, pp. 107-8.

² cf. Wicksteed, *op. cit.*, pp. 365-7.

capital.¹ Lastly, it is necessary to note that the factors within a certain range can be substituted for each other.² It has been argued that in production 'the only positive agent is the entrepreneur in some form or other. Land, labour and capital are merely a heterogeneous mass of resources, by means of which he attains certain ends in the most economical manner possible'.³

We shall, however, adhere to the traditional classification of the factors as it is convenient for an elementary analysis, and proceed to elucidate the nature and functions of each of these four factors of production.⁴

LAND (NATURE)

§6. **Meaning of Land.**—In economics we borrow many terms in common use but often attach special meanings to them. By 'land' we mean all the materials and powers of nature which man adapts for his own use and consumption. Besides 'land' in the ordinary sense of the term, we include such things as sunshine, rain, winds, waterfalls; water above as well as below the surface of the earth, the various minerals, electricity, magnetism and also the animals which man puts to economic uses—everything in fact which is given free by nature, and which man works on with his labour for producing wealth. (*'Land' thus means all gifts of nature in the form in which they exist before man begins to work upon them.*)

While land (i.e. 'external natural forces at the service of man', as Wicksell calls it) is free in the sense that it is not the result of labour, not all of the natural agents are unlimited in quantity in relation to the demand for them. Those that are unlimited (e.g. sunshine, climate, air) of course possess no 'value' and therefore as economists we are not interested in them.⁵ We are interested only in those natural resources

¹ This question is discussed in detail in ch. vii.

² See Benham, *op. cit.*, pp. 113-14 and 194-5.

³ See Briggs and Jordan, *op. cit.* p. 108.

⁴ It has been pointed out that Government and public authorities, both central and local, constitute a further agent in production. For their work is necessary to the very existence of economic life—'by protection of persons and property, by enforcement of contracts, and by provision of currency, of weights and measures, of sanitary services, of public education and the like'—Dearle, *op. cit.*, p. 144. See also ch. xvii.

⁵ However, we do take them into consideration when a comparison is made between the economic position of one country and another.

whose supply, while it is free, is limited and cannot be increased by human action.

§7. Natural resources and their importance.¹—With the growth of scientific knowledge the mastery of man over nature is rapidly increasing. However, in the last resort, man must depend upon the materials and powers of nature, and the part of nature in determining the economic destiny of man cannot be ignored. Nature is the very foundation of economic life.

As already observed, the term 'nature' (land) stands for the entire natural environment, and under environment we may include such things as (i) Contour, (ii) Geographical location, (iii) Climate, (iv) Soil and subsoil, and (v) Vegetable and animal resources.²

(i) Contour.—This refers to the general physical features of a country such as the arrangement of land and water areas, the size and position of mountains and rivers, and the extent and altitude of the land divisions. The configuration or relief of the earth's surface influences economic activity in various ways. Thus according to contour we get either extensive plains giving us level sheets of land suitable for cultivation and facilitating communications (e.g. the Gangetic Plain in Northern India) or mountainous tracts (e.g. the Konkan) with small holdings and difficult communications, or again a gradually undulating slope (e.g. the Deccan Plateau). The altitude, the rivers, and water areas largely influence the climate, vegetable resources, forests, animal resources and navigation.

(ii) Geographical location.—Geographical situation also has an important bearing on a country's material prosperity, and its importance grows with the growth of international commerce. The situational factor may first be considered from the point of view of (a) maritime situation, as referring to proximity to sea, possession of suitable harbours and convenient location on the banks of rivers. This factor largely explains the rise of the Mediterranean, the Atlantic and the Pacific civilizations. London, New York, Bombay, Calcutta and Karachi owe their present importance largely to their favourable maritime location. It is easy to understand therefore why modern States are so anxious to secure direct access to the sea. (b) Secondly, the inland situation of a place in a country covering extensive territory like India is equally

¹ We have given a brief account of India's natural resources in *Elements of Indian Economics*, ch. i.

² cf. Seligman, op cit., pp. 37-48."

significant, having regard to the great volume of internal trade. The old caravan routes and the favourable location of cities like Cawnpore, which have risen from their position as cross-road villages, are instances in point. (c) The industrial location and situation assume special importance with growing commercial and industrial expansion. Proximity to raw materials and cheap power largely determines the localization of an industry;¹ witness the rise of the cotton mill industry in Bombay province, or of the iron and steel industries in the vicinity of the coal and iron fields in Bihar and Orissa.

Attempts to overcome the disadvantages of physical location.—Referring to the possibility of overcoming the disadvantages of physical location, Seligman speaks of a three-fold improvement, namely as regards (a) transportation of men and commodities, (b) transmission of power, and (c) communication of ideas.

(a) *The changes in the methods of transport* from the pack-animal and the sailing boat of olden times to steam and electric transport on land and water (not to speak of air transport) have revolutionized internal and foreign commerce by annihilating distance. The railway in particular has greatly reduced the importance of natural advantages of situation, so that many originally obscure places have come into prominence because the railway line happens to pass near them.

(b) *Transmission of power.*—All production involves the manipulation of matter whose resistance must be overcome by the use of some motive power aiding man's muscular energy. Animal power has been utilized for a long time and is still the principal motive force for the millions of cultivators in India. But it has the obvious limitation of needing food and space. The power supplied by the wind is feeble and intermittent, and the water-mill is necessarily localized. Greater promise has been held out by steam power, or gas (depending on coal, oil, or wood). But electric power is often the cheapest and the most easily portable motive force. It virtually overcomes the handicap of distance and has revolutionized modern industry and greatly altered geographical values in recent times.

(c) *Modern facilities for the communication of ideas* have also, to some extent, reduced the importance of natural location. The post, telegraph, telephone and wireless have contributed to making the world one market, so that changes

¹ See ch. VIII.

in supply and demand in one part of the world make themselves felt almost immediately in all other parts. Thus conditions in the American cotton market quickly react on the Bombay cotton market.

(iii) *Climate*.—Temperature, moisture, the direction and the force of winds, the healthiness or reverse of the atmosphere—all these affect the arts of civilization, the character of the vegetable and animal products and the efficiency of human labour. Extreme heat (as in the Equatorial region), and extreme cold (as in the Arctic regions) are both unfavourable to sustained and progressive economic activity. In tropical countries, the lavish bounties of nature, and the enervating heat, ensure easy conditions of life for man on the one hand, and on the other encourage dullness and lethargy. A temperate climate as in western Europe is conducive to continuous progress, since on the one hand, nature is not too bountiful, and sustained effort is necessary in order to make a living; while on the other hand, nature is not too niggardly, and human effort does get its reward in the long run. A more favourable climate is at least one of the causes of the superior efficiency of European as compared with Indian labour.

The rainfall (moisture) factor influences the growth of forests, the size and utility of rivers, the nature of vegetable and animal resources, etc. Thus the moist climate of Lancashire is favourable for spinning the higher counts of yarn; Bombay enjoys a similar advantage, though in a smaller degree. Climate also affects the birth-rate and age of maturity, as also the occupations of the people and their attitude towards the State. A favourable climate and adequate moisture develop self-reliance and individualism as in the United Kingdom, but inadequate moisture and semi-arid conditions, as in Australia or in those precarious tracts in India which are liable to frequent drought, make the people look to the State for most things, and invite State initiative and action. The great influence of the monsoon currents on our national economy is discussed in our *Elements of Indian Economics*.

(iv) *Soil and subsoil*.—The influence of soil conditions on agricultural productivity and vegetable resources is obvious. A rich soil will support a dense population, as in the case of the fertile alluvial soils of the Indo-Gangetic Plain. On the other hand, population will be sparse in rocky or inhospitable tracts of land poor in chemical ingredients, which are

either uncultivable wastes or at best only useful for sheep-farming or cattle-grazing.

Under subsoil conditions, we may take note of such factors as the presence or absence of mineral wealth. Mineral resources have played a significant part in the early stages of civilization. We thus speak of the Stone Age, the Bronze Age, the Iron Age, etc. We ourselves may be said to be living in an Iron and Coal Age. The iron, steel, mineral oil, and coal-mining industries are most important for economic development, and that is why we call them 'key industries'. England's economic prosperity has been favoured by her fortunate possession of coal and iron ore deposits occurring near each other. Our survey of the mineral resources of India will show how India possesses a large range of mineral deposits and appears fitted to be an important industrial country.

(v) *Vegetable and animal resources.*—As already observed, these are largely conditioned by natural factors like altitude, climate, and soil conditions. In a primarily vegetarian and agricultural country like India, the part played by its flora and fauna can hardly be exaggerated. The supply of food, of raw materials, of animal power, of means of locomotion, etc., depends upon the effective exploitation of our vegetable resources, which include our main crops of rice, wheat, cotton, oil-seeds, jute, etc., and of our animal resources, which consist of the cow, ox, buffalo, sheep, horse, camel, etc. The course of civilization has been determined in the past by the adequacy or otherwise of these resources.

The foregoing survey clearly shows that the character of the natural resources and the lavishness or niggardliness with which a country has been endowed in respect of them have an important influence in determining the economic strength and prosperity of its people. A favourable geographical position for carrying on international trade, the possession of good harbours, a fertile soil, a temperate and invigorating climate, navigable rivers, valuable coal and iron ore deposits, and a rich and varied flora and fauna are obviously advantages which have great economic value, provided the people who possess them know how to make use of them. ✓

§8. Combinations of Factors: Laws of Production (Increasing, Constant and Diminishing Returns).—In order to produce wealth man has to make an effort to avert scarcity and to increase the limited means of satisfying his wants. If more wealth is desired, we can only secure it by using the factors of production more and more and by generally combining them in variable proportions in the production of

different goods. This raises the question of the effect upon output of changes in the proportions of the different factors employed. This question is usually discussed in connexion with the well-known Law of Diminishing Returns.¹ The relation between the effort (cost) put forward and the wealth (output) created in response to that effort is not of an unvarying character. Sometimes an increase of effort may give us a more than proportionate increase of response. Thus suppose we employ Rs. 10,000 as capital and twenty labourers, the value of the goods produced with the help of this equipment is, let us say, Rs. x . Now we double the equipment, that is to say invest another Rs. 10,000, and employ another set of twenty labourers. It may happen that with this enlarged equipment certain new economies become possible and that the working of the establishment becomes more efficient. As a result of this we get an *additional* supply of goods worth say Rs. $1\frac{1}{2}x$. The return in this case is more than proportionate to the increase of effort in the shape of the extra Rs. 10,000 and the labour of twenty more men. By doubling the effort we have more than doubled the value of the produce, the value of the goods now being Rs. $(x + 1\frac{1}{2}x)$, or Rs. $2\frac{1}{2}x$ instead of only Rs. $2x$. When this kind of thing happens, we say that the Law of Increasing Returns or Diminishing Cost is in operation. When the response to increased effort does not change, that is, if the additional capital and labour gives us the same additional return as before—namely another Rs. x —we say that the Law of Constant Returns or Constant Cost is in operation. If the result is *less than proportionate*, i.e. if we were to get an addition of, say, Rs. $\frac{3}{4}x$, we should say that the Law of Diminishing Returns or Increasing Cost was in operation. The response from each one of the agents of production, namely land, labour, capital and organization, may exhibit at different times every one of the three varieties of (i) Increasing, (ii) Constant, or (iii) Diminishing Returns which may be looked upon as different phases of a comprehensive Law of Varying Productivity and which operates according to circumstances and conditions in all forms of production. But a persistent demand on any one of these agents of production will eventually be met by diminishing returns. The Law of Diminishing Returns is therefore of fundamental importance. Constant or increasing returns may not show themselves at all. Or if they do show themselves they do so in a fitful and un-

¹ See Benham, *op. cit.*, p. 123.

certain manner. But we can depend upon the Law of Diminishing Returns asserting itself in the long run. The operation of this law is best explained with reference to land, which shows its working in a more pronounced manner than any of the other factors of production.¹ The following statement of the law as given by Marshall is for that reason made with special reference to land, though the law itself is really of universal application, i.e. it applies to all the four factors of production.

§9. Law of Diminishing Returns or Increasing Cost.—'An increase in the capital and labour applied in the cultivation of land causes in general a less than proportionate increase in the amount of the produce raised, unless it happens to coincide with an improvement in the arts of agriculture.'²

Beyond a certain point, or after a certain stage in the cultivation of land has been reached, every further increase in the amount of labour and capital applied to it produces a less than proportionate return. What is meant is not that the *total return* from the land diminishes, but that the *additional return* received as the result of further expenditure is less than proportionate to the additional outlay. The law may also be stated as a Law of Increasing Cost. Beyond a certain point an increase in the returns from land can only be secured at an increasing cost in labour and capital. A stage will be reached when the return will so far diminish as to fall below the outlay as the cost per unit increases. Obviously a wise farmer will stop applying any further doses of labour and capital at the point where he finds that additional yield from a particular dose just equals his expenditure. Land, as everybody knows, is not all of the same quality. Some lands are more fertile and others less. At first, of course, only the superior lands will be cultivated. But as the yield diminishes it may be more profitable to take up the inferior land for cultivation rather than lay out more and more capital and labour on the superior land. Thus, let us suppose there are three kinds of land available for cultivation, A, B and C. A is the best land, B comes after it in point of fertility, and C stands last being the least fertile of the three. The farmer would naturally cultivate land A first. Let us imagine that he applies successive 'doses' of capital and labour which cost him, say, Rs. 50 each and that the crop he wishes to raise

¹ The tendency towards diminishing returns in relation to agriculture was first clearly stated by Malthus and Ricardo.

² Marshall, *Principles of Economics*, p. 150.

is wheat which is selling in the market at the rate of 4 seers to the rupee. The application of the first dose of capital and labour gives him 500 seers. He spends another Rs. 50 and gets 450 seers, the third dose of Rs. 50 gives him 400 seers. Here he finds it worth while passing on to the cultivation of *B*, where his first outlay of Rs. 50 yields 350 seers; then he prefers to go back to *A* where an investment of another Rs. 50 gives 300 seers. After this he finds it profitable to turn to *C* which yields him 275 seers. The subsequent doses are in the following order :

| | | | |
|----------|-----|-----|-----------|
| <i>C</i> | ... | ... | 250 seers |
| <i>A</i> | . | . | 225 " |
| <i>B</i> | .. | . | 225 " |
| <i>A</i> | .. | ... | 200 " |
| <i>B</i> | . | . | 200 " |
| <i>C</i> | . | .. | 200 " |

The net result of his operations may be set out as follows :

LAND A

| EXPENDITURE | PRODUCT IN SEERS | COST PER SEER | Increasing Costs or Diminishing Returns |
|------------------------|-----------------------|------------------------------|---|
| 1st Rs. 50 | 500 | $\frac{1}{5}$ th of a rupee | |
| 2nd Rs. 50 | 450 | $\frac{1}{4}$ th of a rupee | |
| 3rd Rs. 50 | 400 | $\frac{1}{3}$ th of a rupee | |
| 5th Rs. 50 | 300 | $\frac{1}{3}$ th of a rupee | |
| 8th Rs. 50 | 225 | $\frac{4}{3}$ ths of a rupee | |
| 10th Rs. 50 | 200 | $\frac{1}{2}$ th of a rupee | |
| Total outlay } Rs. 300 | Total produce } 2,075 | ... | |

LAND B

| EXPENDITURE | PRODUCE IN SEERS | COST PER SEER | Increasing Costs or Diminishing Returns |
|------------------------|---------------------|------------------------------|---|
| 4th Rs. 50 | 350 | $\frac{1}{3}$ th of a rupee | |
| 9th Rs. 50 | 225 | $\frac{4}{3}$ ths of a rupee | |
| 11th Rs. 50 | 200 | $\frac{1}{2}$ th of a rupee | |
| Total outlay } Rs. 150 | Total produce } 775 | ... | |

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LAND C

| EXPENDITURE | PRODUCE IN SEERS | COST PER SEER | Increasing Costs or Diminishing Returns |
|-----------------------------|--------------------------|-----------------------------|--|
| 6th Rs. 50 | 275 | $\frac{2}{3}$ th of a rupee | |
| 7th Rs. 50 | 250 | $\frac{1}{2}$ th of a rupee | |
| 12th Rs. 50 | 200 | $\frac{1}{4}$ th of a rupee | |
| Total } Rs. 150 outlay } | Total } produce } 725 | ... | |

The cultivation of each kind of land is in this manner pushed to a point beyond which it ceases to be profitable. In the above example, it pays to spend Rs. 300 on *A* and Rs. 150 each on *B* and *C*. An additional dose of Rs. 50 will yield less than 200 seers on all these lands. Production of 200 seers just enables the farmer to recover his Rs. 50 at the current market price of 4 seers per rupee. Less than that will mean a loss to him.

The point that is brought out in the above example is that returns diminish or, what comes to the same thing, costs increase with every successive application of capital and labour, whether we use our additional outlay on the same land or on some other (inferior) land. Thus when the fourth Rs. 50 was spent on *B* following the third Rs. 50 spent on *A*, the yield diminished from 400 seers to 350 seers, i.e. the cost went up from $\frac{1}{3}$ th of a rupee to $\frac{1}{2}$ th of a rupee per seer. We get similar results by taking each kind of land separately, e.g. *A*'s responses to successive doses are represented by the figures 500 seers \rightarrow 450 seers \rightarrow 400 seers \rightarrow 300 seers \rightarrow 225 seers \rightarrow 200 seers, and the corresponding costs are $\frac{1}{10}$, $\frac{1}{8}$, $\frac{1}{6}$, $\frac{1}{4}$, $\frac{1}{3}$ and $\frac{1}{2}$ of a rupee per seer.

If the returns diminish in passing from one kind of land to another, this is the *extensive* aspect (corresponding to extensive cultivation) of the Law of Diminishing Returns. When the returns diminish as we apply more and more capital and labour to the same land, we talk of this as the *intensive* aspect (corresponding to intensive cultivation) of the Law of Diminishing Returns. When more produce is needed, we obtain it partly by working old lands more intensively and partly by resorting to new lands, which at first we had ignored because of their relative inferiority. Thus, generally speaking, the Law of Diminishing Returns

is found to be in operation in both of its aspects, extensive as well as intensive. The fact that lands known to be inferior are cultivated at all is itself a proof of the truth of the Law of Diminishing Returns in its intensive form. For if the superior productivity was experienced indefinitely in the case of the better lands we should prefer continuing to take advantage of this, and need never use the inferior lands at all. Similarly the fact that we think of new lands *only after the cost on the old ones has risen* to a certain level is itself a proof of the operation of the law in its extensive aspect.

§10. **Qualifications and conditions.**—The Law of Diminishing Returns holds good only under certain conditions and is subject to certain qualifications. (i) In the first place, we must remember that in the earlier stages of cultivation we may find returns increasing instead of diminishing until the land is used most efficiently and the margin of profitable cultivation is reached.¹ But after this point is reached the increasing returns give place to diminishing returns.

(ii) An increase in capital and labour causes a less than proportionate increase in the produce, 'unless it happens to coincide with an improvement in the arts of agriculture'. As Dr Cannan points out, the tendency towards diminishing returns applies 'to some or any one given time, so that it excludes the consideration of the changes in man's knowledge and other circumstances'.² These are continually changing and the adoption of improvements (in implements, manures, organization, etc.) may result in increasing returns. In our example, the first dose applied to A gives 500 seers. But before the second dose of Rs. 50 is applied, the methods of cultivation may have improved and consequently the return may be 700 seers instead of 450. Yet, once the new methods are established, the same phenomenon of a progressive fall in output will show itself. Only the fall will now be from 700 seers instead of from the original 500 seers. The law assumes that any given methods of working the land (whether backward or advanced) remain stable. Therefore the fact that with the change of methods the output will be greater for the same expenditure cannot be regarded as an exception to the Law of Diminishing Returns.

Contrary to the common opinion, remarkable agricultural developments have taken place, particularly since the Great War (1914-18), thanks to mechanization and bio-chemistry,

¹ Marshall's statement of the law given above is for this reason careful to include the words 'in general'.

² E Cannan, *Wealth*, p. 61.

and efficiency has kept pace with demand not only in manufacture but also in agriculture. The tendency to diminishing returns has thus been held in check.¹

(iii) The law suggests that the order of cultivation is from the better to the worse lands. It does not, however, require that any current classification of soils as good or bad must never change. Land at first regarded as inferior may later appear as superior (owing to the discovery of new methods, the construction of new roads and railways, etc.). This, however, does not in any way invalidate the Law of Diminishing Returns, for which all that is necessary is that under any given set of conditions some lands should be better and more profitable to work than others. All we need is that lands should always fall into different grades, and not that the grading should never change.

§11. Other applications of the Law of Diminishing Returns.

—The argument showing how the Law of Diminishing Returns applies to land used for building sites,² to mining, fisheries, plantations and other extractive industries, runs on lines exactly similar to those just indicated with reference to agricultural land.

It is also not very difficult to see the working of the Law in relation to the other factors of production. Take a machine, for example, as typical of capital. Employing more labourers to operate it, or using more and more coal as a source of power for keeping it in motion, may for a time increase the efficiency of the machine. But sooner or later additional doses of 'land' and labour will cease to evoke proportionate responses. Too much coal, for example, will choke a steam-engine instead of making it work better. Similarly the efficiency of the labour force will show a satisfactory increase for a while, as more and more land and capital and more and more organizing ability are associated with it. But the point will eventually be reached when it will be necessary to call a halt to this process, because it is found not to pay any further. 'We conclude that if in a combination of factors one factor remains unchanged while the others are increased, additional units of those factors will, after a certain point, yield a smaller return than preceding ones.'³

¹ 'One great problem of recent years has been the disproportionate fall of many agricultural prices as compared with industrial prices. It is true, as Marshall thought, that there is probably some ultimate limit to the agricultural resources of the world; but that limit does not yet seem to be in sight' Dearle, *op. cit.*, p. 169.

² For further particulars see ch. xiii.

³ Roll, *op. cit.*, p. 152.

While, however, the Law of Diminishing Returns is unmistakable in its operation when we consider the limits of the productivity of every single unit of land, labour, capital and organization, the differences between land and the other factors are (i) that the supply of land is usually considered to be limited,¹ and (ii) that recourse to *other* lands means recourse to progressively inferior lands. The supply of labour and machines and organizing ability may on the contrary be regarded as unlimited from the point of view of any one given business or firm. Additional supply of labour does not mean that the labourers employed later are less efficient. Similarly we can have more machines and more factories, if necessary, without any limit, humanly speaking, and the later machines and factories may be just as good as the earlier ones.

So far as the factors other than land are concerned, we may say, therefore, that the Law is not seen to operate in its *extensive* aspect. This is what is implied when it is said sometimes that the Law applies only to land and not to the other agents of production.

The foregoing analysis makes it clear that it is not possible to classify the several industries into two categories, namely (i) extractive industries including agriculture which may be said to follow the Law of Diminishing Returns, and (ii) manufacturing industries which follow the Law of Increasing Returns. At the same time it may be stated that when in any act of wealth production, the part which land or nature plays is predominant, as in agriculture, we may witness quickly and unmistakably the operation of the Law of Diminishing Returns. Where, however, the part of land or nature is subordinate and the part of man is predominant, the Law of Diminishing Returns may be masked for a long time during which we may succeed in securing constant if not increasing returns, as in manufactures.

§12. Significance of the Law of Diminishing Returns.—The Law of Diminishing Returns is a basic law of economic life and economic progress is steadily aiming at counteracting the tendency towards diminishing returns. The Law has a pessimistic significance, especially for old countries of the world like England and India, and is intimately connected with the Malthusian Theory of Population (see ch. vi) and the Ricardian Theory of Rent (see ch. xiii).

§13. Diagrammatic illustrations of the Laws of Diminishing,

¹ See, however, also ch. vii.

Constant and Increasing Returns.—These Laws are represented graphically in Figs. 7 (a), (b) and (c), where OB, BD, DF=say Rs. 50 and the lines AB, CD, EF represent the returns to successive applications of doses of productive power.

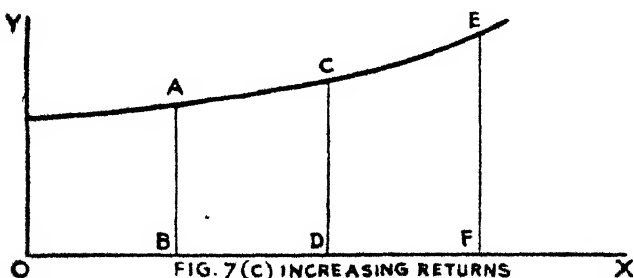
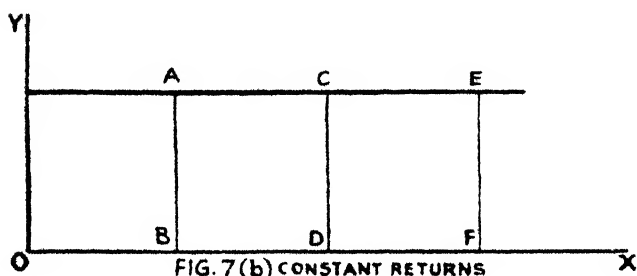
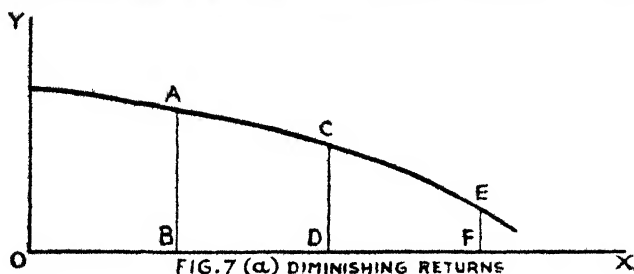


FIG. 7.—DIAGRAMMATIC REPRESENTATIONS OF THE LAWS OF DIMINISHING, CONSTANT AND INCREASING RETURNS

SUMMARY

By 'production' we mean adding or creating values or utilities—form-utilities, place-utilities or time-utilities. The utilities created may be material or immaterial. *Productive occupations* fall into three main classes: (i) Industrial occupations, (ii) Commercial occupations, and (iii) Direct services to consumers and public services. Any labour which issues in the production of 'wealth', i.e. creation of utilities, and seeks to overcome scarcity of means is

productive. Labour which fails of its purpose or which is purely predatory is unproductive. The test to apply is whether it satisfies some want that is actually felt.

In the production of wealth the co-operation of (i) Land, (ii) Labour, (iii) Capital, and (iv) Organization is involved. These four are called the *Factors* or *Agents of Production*. This traditional classification has been criticized by modern economists, but is useful for elementary economic analysis.

Land (Nature).—'Land' in economics has a much wider meaning than in ordinary language. It includes all the materials and powers which are freely given by nature and which man utilizes for wealth production. Their supply is limited and cannot be increased by human effort. A country's economic destiny depends, among other things, on whether nature has been bountiful or niggardly in respect of contour, location, climate, soil and subsoil, vegetable and animal resources.

The combination of factors of production in variable proportions raises the question of the Law of Diminishing Returns. The employment of additional doses of capital and labour may be attended with different results at different times giving rise to the Law of varying Productivity or Returns. Sometimes the returns may be more than proportionate to the additional effort (Increasing Returns) and sometimes they may be just proportionate (Constant Returns). But eventually the returns will be less than proportionate (Diminishing Returns). This tendency is known as the *Law of Diminishing Returns* or of *Increasing Cost* and is of fundamental importance in production, particularly when in production we are concerned with 'land' more than with the other factors of production. It is therefore commonly stated thus with reference to land: 'An increase in the capital and labour applied in the cultivation of land causes in general a less than proportionate increase in the amount of the produce raised, unless it happens to coincide with an improvement in the arts of agriculture.' This result follows whether the increased capital and labour are applied to the same land or to another plot which, being relatively inferior, was not at first taken up for cultivation. In the first case, we get the intensive aspect, and in the second case, the extensive aspect of the Law of Diminishing Returns. The law is subject to the following qualifications: (i) it may not show itself for some time in the beginning; (ii) it may be held in abeyance if there are sufficiently important improvements in the arts of agriculture as has undoubtedly been the case since the war of 1914-18; (iii) in its extensive aspect, it assumes land to be graded into superior and inferior. But this gradation is relative to a given time or set of circumstances and may change in course of time and under a different set of circumstances.

Other instances of 'land' are building sites, mines, fisheries, plantations, etc. and the law applies to them in the same manner as to agricultural land.

It is also applicable to the other factors of production with the differences that (i) whereas land is generally considered to be limited, the other factors may for all practical purposes be regarded as unlimited, and (ii) the operation of the law in its extensive aspect is not so clear or so inevitable as in the case of land.

The Law of Diminishing Returns is a basic law of economic life and is bound up with the Malthusian Theory of Population and the Ricardian Theory of Rent.

VI

PRODUCTION : LABOUR

§1. **Characteristics of labour.**—Labour is any human effort which has an aim and purpose outside of itself, and which contributes to wealth-production. The exertion may be wholly or mainly physical or muscular, or it may be wholly or mainly mental or nervous. It may be of a mechanical or routine character, or it may involve the exercise of the highest human faculties. Again, some labour may involve much responsibility and other labour may not do so to any great extent.

Amidst all these variations, however, considered as an agent of production, labour must always possess two characteristics : (i) It must be undergone not for its own sake but primarily with a view to some reward outside of itself. The bodily exertion of an amateur gymnast, however strenuous it may be, is not labour in the economic sense. But if people have to pay to witness the gymnast's feats, then it becomes labour.

Some labour is essential and healthful to all normally constituted human beings, and under certain conditions it may be altogether pleasant to the labourer. But these are incidental advantages, and economic labour is put forth not in order to reap these advantages but for the remuneration attached to it.

In any case, while some labour may be pleasant, a good deal is also unpleasant and involves heavy toil, and it would not be forthcoming without inducement in the shape of wages. Again, a man may sometimes gladly do work of certain kinds for the mere pleasure of it, provided he is free to take it up or stop it as the spirit moves him. But modern industry requires steady continuous labour. When a man *must* put in a certain number of hours' work, whether he feels inclined to do so or not, the element of compulsion turns labour that may otherwise be pleasant into something irksome. Every student knows how an otherwise charming book becomes hateful directly it is prescribed as a textbook, which he is compelled to study for an examination!

Labour thus involves strain and sacrifice. This, however, is how the labourer himself regards it, and it is therefore called the *subjective* aspect of labour. According to this

point of view, the amount of sacrifice entailed and, therefore, the reward expected depend upon such considerations as the following: the time per day or week during which work has to be done, the intensity of the work, the nature of the work—whether it is regarded as respectable or not—the physical, moral and social surroundings under which it has to be done, whether it is exceptionally unpleasant or exceptionally unhealthy, involving early retirement or death, and the expensiveness or otherwise of the previous training it requires.

(ii) The second characteristic of labour is that it must result in the creation of wealth, that is something which has an exchange-value. Mere intention to create wealth is not enough. The intention must be successfully fulfilled. All the labour of a cultivator is lost if the crops he has painfully raised are eaten by wild animals or destroyed by disease. Labour which is misdirected or which miscarries will naturally not command any reward and is, economically speaking, not labour at all.

The consideration that labour must result in the creation of wealth serves to call attention to the *objective* aspect of labour. The reward offered (by the employer) for work done will obviously be according to the results of labour (and not according to the painful feelings associated with it); in other words it will depend on the *efficiency* of labour.

§2. Conditions of efficiency.—Industrial efficiency depends on the health and strength—physical, mental and moral—of the worker. The output of the worker will first depend upon the *standard of his health*. This in its turn will depend on his income and the manner in which he spends it. Civilized States nowadays perform functions of the highest importance in protecting the community from disease, e.g. in providing pure water supply and compulsory vaccination. These functions cannot be left to individuals or to the spasmodic efforts of private charity. The money spent on public health and sanitation by the public authorities is the soundest of national investments. Apart from measures of public health, for creating an efficient labour force a satisfactory system of *education*—general as well as technical—is necessary. Such education will increase the workers' general resourcefulness and power of adaptation to surroundings, will raise their self-respect and stimulate their ambition. The educational system should be devised to test the students' ability and special aptitudes, so that they can be advised to choose occupations for which they are fitted.

The *surroundings* in which labourers are required to work

should be healthy and as pleasant as possible. A few employers have realized the importance of this factor as part of scientific management, and production has been greatly improved. The *wages* should be *high* enough to enable the worker to obtain not only a sufficiency of the bare necessities of life, but also necessities for efficiency and a few of the modest comforts and luxuries of life. In this connexion, the importance of a *well-balanced and nutritious dietary* is obvious. Then again, *housing conditions* have a direct bearing on the efficiency of the worker. Slum life spells squalor, drink, disease and crime and therefore lowers efficiency; while good houses mean better home life, happiness and health, and therefore raise efficiency. The *hours of labour* should be limited so as to allow a margin of leisure for purposes of rest, recreation and self-improvement. The *atmosphere* in which the labourer lives and works must be one of hope, freedom and change.

It is difficult to say how far economic efficiency is a matter of *race* and *heredity*. Certain races like the negroes are said to be incapable of the sustained effort necessary under present conditions of wealth-production. In most cases, however, there are good grounds for holding that the existing deficiencies are not inherent and irremediable, but are capable of being removed by education and improvement of environment.

Climate is another factor which has a bearing on efficiency. Extremes of heat and cold are unfavourable to efficiency. The highest efficiency is developed in regions with a temperate climate, and the lowest where the climate is hot as well as damp. A temperate climate enables man to maintain physical activity and vigour, as it hardens without exhausting.

A workman's efficiency is affected not only by his individual mental and physical faculties, but also by the efficiency of the group in which he co-operates. This raises the question of division of labour and capitalist methods of large-scale production, discussed in chapter viii.

The advantages of an efficient labour force are numerous : it takes less time to learn its work, requires little supervision, wastes little or no material, handles delicate machinery better, and though highly paid is cheaper in the long run. On the other hand, 'cheap labour is dear labour' if, as is usually the case, it is inefficient. For example, labour in the U.S.A. in general falls into the first category, while labour in India in general falls into the second category.

§3. Size of population and efficiency.—Up to a certain point,

increase in size of population helps to increase the efficiency of labour by facilitating large-scale production, co-operation and division of labour. But a time comes when a further increase in population is no longer advantageous. Suppose that there are two countries exactly similar in respect of available natural resources, that labour in each is equally efficient and that, further, the proportion of workers to non-workers is also the same in each. Under these conditions, if one country has twice the number of people that the other has, the labour-power of the former will also obviously be twice as great. The student, however, should not jump to the conclusion that the first country (that is, its inhabitants) will necessarily be twice as well off. The relation between the size of population and economic prosperity is not so simple as that, as will be seen later on.

§4. **Malthusian doctrine of population.**—Here it is convenient to introduce a discussion of Malthus' Doctrine of Population. Malthus (1766-1834) wrote his famous *Essay on the Principle of Population* in 1798. In the later editions of this celebrated work he summarized his conclusions as follows:

(i) Population is necessarily limited by the means of subsistence.

(ii) Population invariably increases where the means of subsistence increase, unless prevented by some powerful and obvious check.

(iii) These checks, and the checks which repress the superior power of population and keep its effects on a level with the means of subsistence, are all resolvable into moral restraint, vice and misery.

The first proposition requires no proof. A certain minimum amount of food is required to keep a human being alive. If human beings grow in numbers but food cannot be increased in proportion, death by starvation will follow until the size of the population is such as can be maintained by the available food-supply.

By his second proposition Malthus tries to convey his notion that increase in food-supply is swiftly followed by increase in population. In fact, in his opinion the rate of population growth is much greater than the rate of growth of means of subsistence. Every twenty-five years population tends to double itself. i.e. it increases in geometrical progression in the series 1 : 2 : 4 : 8 : 16 : 32, and so on.

Food-supply on the other hand increases in arithmetical progression in the series 1 : 2 : 3 : 4 : 5 : 6, and so on. There is, however, no proof establishing these ratios. What we

should now say is this : except in very rare cases and except for very short periods, every increase in population is followed by a less than proportionate increase of food-supply (or to put it more generally—of *wealth*).

If a highly civilized people, already well advanced in knowledge and the arts of production, transplant themselves to some new and hitherto unexploited part of the globe, they may find that for some time with every increase of population there is a more than proportionate increase in production. Therefore for some time growth of population may go hand in hand with increase in wealth and prosperity. But unless there is constant improvement in knowledge and the arts of production, a time comes when increasing returns give place to diminishing returns.¹ Nature fails to respond to greater human effort made possible by increase in numbers, and forces restraining population within the limits of subsistence come into operation. Malthus classifies these forces under the headings of (a) moral restraint, and (b) vice and misery. Another classification suggested by him is (a) preventive checks, and (b) positive checks.

By moral restraint, Malthus means 'restraint from marriage from prudential motives, with a conduct strictly moral during the period of this restraint'.

Preventive checks are all those influences (good or bad) which lead to a diminution of birth-rate. If population is not regulated by the exercise of preventive checks, positive checks come into operation. Positive checks, according to Malthus, mean all those influences by which the death-rate increases, that is to say, 'the whole train of epidemics, wars, plagues and famines'. If we wish to avoid the positive checks and all the human misery and suffering they necessarily involve, we must use the right type of preventive checks. The only preventive check which Malthus blesses and sanctions is moral restraint as defined above.

§5. Qualifications of the Malthusian doctrine.—Subject to certain amendments the Malthusian doctrine is generally accepted nowadays. But our propositions in this connexion are less dogmatic than they appear in Malthus' treatment of the subject. Malthus' mathematical formula expressing the ratios of increase of food and increase of numbers is now discredited. Also we no longer say that population, if un-

¹ Malthus's theory is thus bound up with the Law of Diminishing Returns, although he did not clearly state this law and it was left to Ricardo to develop it further.

checked, is always ahead of production. We say that this may very often be the case. It is conceivable that human ingenuity may provide means by which any given growth of population is more than offset by increase of wealth production. This may be said to have happened in England during the period of the Industrial Revolution. But, of course, there is no guarantee that there will be a constant and adequate improvement in human invention to cope with every increase of population. In any case, in the modern statement of the theory of population, the comparison is effected not between population and food, but between population and wealth, and the emphasis has been shifted from food to wealth. The population problem is thus whether enough wealth per head in some form or other is available for the livelihood of the individual. It is also noteworthy that the limits of food-supply have been found to be more elastic than Malthus thought, thanks to the opening up of new regions by means of the railway, the steamship and agricultural improvements.

If we are not able to increase wealth in proportion to increase in population, the only way to prevent misery is deliberately to check numbers. As stated above, Malthus approves of only one method of checking excessive growth of population, and that is moral restraint, i.e. the postponement of marriage. Modern opinion views this remedy as impracticable, unnecessary or even undesirable, and advocates recourse to neo-Malthusian methods of controlling births. There are good reasons for supposing that these methods are being largely followed in most of the civilized countries of the west, and their use (birth control) seems to have falsified Malthus's prophecies.

§6. Theory of Optimum population.—Before taking leave of this subject, we may indicate a modern approach to the theory of population, for which the late Dr Cannan was responsible. He introduced the term 'optimum population' which he explained as follows :

'At any given time, or, which comes to the same thing, knowledge and circumstances remaining the same, there is what may be called a point of maximum return, when the amount of labour is such that both an increase and a decrease in it would diminish proportionate returns. . . . Just as there is a point of maximum return in each industry, so there must be in all industries taken together. If population is not large enough to bring all industry up to that point, returns will be less than they might be, and the remedy is increase of population; if, on the other hand, population is

so great that the point has been passed, returns are again less than they might be, and the remedy is decrease of population.¹

The theory of optimum population, outlined above, 'is concerned with the relation between the size of the population and productive efficiency, or in other words, the amounts of all the other factors, which co-operate with labour in production and the technical coefficients of production'.² The optimum population is the one which will produce the maximum product or biggest output of goods and services, i.e. the highest *per capita* income. In the modern theory of population, over-population as well as under-population are related to the optimum size of the population; both imply lower than maximum returns which could be realized with optimum population, and therefore, a lower *per capita* income.³

The concept of optimum population makes it clear that a nation may suffer economically because the population is too small in size, just as it may suffer because it is too big. So far as we can, we must avoid both the evils—the evil of under-population as well as the evil of over-population.

The problem of population policy, so far as mere economic considerations are concerned, is to aim at the optimum population. As Sir William Beveridge points out, the optimum population is a hypothetical figure which cannot be precisely determined. Some indication may, however, be furnished by changes in the national income per head.

It is necessary to bear in mind that the optimum is not a size which is rigidly fixed. As Dr Cannan points out, it is being perpetually altered by the progress of knowledge and other changes affecting the economic system. It is thus a dynamic concept.

We have spoken above of the modern emphasis on bringing about the retardation of an excessively high rate of increase by voluntary limitation of the birth-rate. Apart from and independently of this method, western experience teaches that a decrease of the death-rate in some unexplained manner causes a corresponding decrease of the birth-rate. If for instance, owing to improved public health measures, people live longer, they breed less fast, even without any deliberate attempt on their part to reduce the birth-rate. Again, it is

¹ Cannan, *op. cit.*, pp. 68-9.

² Roll, *op. cit.*, pp. 215.

³ For a fuller study of the theory of optimum population, see A. M. Carr-Saunders, *The Population Problem*, and J. E. Mead, *An Introduction to Economic Analysis and Policy*, Part IV.

now taken as established that fertility decreases with increase of wealth and comfort and with the growth of cultural and intellectual interests. Lastly, if people get accustomed to a higher standard of life, and, owing to the advance of education, become more and more capable of forethought and prudence, they tend deliberately to check the birth-rate and thus succeed in keeping up the higher standard of living. An important aspect of progress is the education not only of men but also of women. Female education makes women less and less inclined to regard marriage as the only profession open to them. They seek other spheres of usefulness and activity and may often choose to remain unmarried.

Again the general progress of the community in health and education will make it economically more efficient. Thus while wealth will increase, forces will come into operation limiting the population to the optimum size.¹

§7. Factors determining size and density of population.—

(i) *Size*.—The increase of population in a country is found by taking into consideration the birth-rate and adding to the number of persons born those that have immigrated into the country from abroad. On the other hand, we have to deduct from this total the number of persons who die during a certain period (usually a year) and also the persons who emigrate from that country. Thus a given population is constantly gaining at one end by birth and immigration, and losing at the other end by death and emigration. The birth-rate depends largely upon the frequency of marriage and its fecundity. We must count the illegitimate as well as legitimate births. The question of the Indian birth- and death-rates is considered in our *Elements of Indian Economics*.

(ii) *Density of population*.—The density of population (expressed usually in terms of the number per square mile

¹ See our *Elements of Indian Economics*, ch. 1, for a discussion of the population problem in India. The striking decline in the birth-rate in France and Great Britain in recent years has given rise to apprehensions of stationary or even declining populations. 'With a smaller population due to a lower birth-rate the proportion of old people will increase, and as the national income may tend to decline, the problems of old-age pensions and National Debt may become a serious matter.' (Briggs and Jordan, op. cit., p. 14.) Apart from the adverse social and economic consequences of a stationary or declining population, countries like France with an extensive land frontier to defend against neighbours like Germany, are obviously interested in devising measures for checking a decrease in population. Indeed, Germany and Italy have gone much further and adopted a vigorous policy for stimulating the growth of their populations.

of territory) depends on the environment and its utilization by man, on climatic conditions, security of life and property, standard of comfort, economic resources and the stage of economic development. While natural conditions such as fertility, temperature, rainfall and altitude have an important bearing on the density of the population, the human factor has come to exercise a decisive influence on the density. The area necessary for the support of a given number has steadily decreased with the progress of civilization from the hunting and pastoral to the agricultural stage, and thence to the manufacturing stage. Thus a highly industrialized and commercialized country with intensive agriculture will show the highest density of population, as for example the United Kingdom and Belgium, where the density is well above 650 per square mile. Moderate development of both gives a medium density (about 250) as in India. Further, in an agricultural country the density of population will also depend upon the character of the cultivation.¹

One point that deserves emphasis is that mere numbers supported per square mile have small significance unless we also take into account the standard of comfort of the population in question. Thus, it would be misleading to infer from the almost equal density of Bengal and of Belgium and England, that Bengal is economically as well off as these other countries. It is well known that the standard of living in Bengal is much lower. The high density in Bengal is, therefore, to be regarded rather as an index of its poverty and economic backwardness.

§8. Mobility of labour.—The term 'mobility of labour' indicates the ease with which labour can flow from one place or occupation to another, while the term 'immobility of labour' indicates the difficulty of such a movement. Since the labourer has to deliver his labour *personally*, it is clear that the mobility of labour and the mobility of the labourer are convertible terms.

(i) *Geographical mobility of labour from one place to another.*—As Adam Smith has said, 'of all sorts of luggage man is the most difficult to be transported'. He is by nature inclined to remain where he usually resides or where he is born. Fondness for home, reluctance to leave old associations, patriotism, family considerations, natural inertia, difficulties

¹ See our *Indian Economics*, vol. I, 7th ed., ch. iii, §§3-4, and Appendix I; and the same authors' *Elements of Indian Economics*, ch. i. Also Seligman, *op. cit.*, pp. 49-52.

of language, ignorance and restrictions on emigration and immigration, prevent free movement of labour from one place to another even when a man is thereby likely to improve his prospects.

(ii) *Horizontal mobility of labour*.—Horizontal mobility means mobility as between one occupation or trade and another of the same kind. No change or very little change in the nature of the task is entailed, the grade of work remaining the same (e.g. a typist could readily move from a textile to a mining office or a good chauffeur could become a pilot, and so on). This kind of mobility is relatively freer than the vertical mobility of labour since the degree of skill and the general nature of work are the same.

(iii) *Vertical mobility of labour*.—This occurs as between trades or occupations of *different* kinds, involving either an upward movement of labour from an inferior to a superior grade (e.g. a clerk in an office becoming the office manager or a railway porter becoming a guard), or from an upper grade to a lower grade in the same or a different industry. This kind of mobility is more difficult to attain owing to the influence of hereditary occupations, high educational expenses, personal pride in the craft, lack of ambition and of the necessary facilities to secure promotion. The vertical immobility of labour results in the stratification of society into more or less non-competing groups, and affects their rewards.¹

(iv) *Social mobility*.—Lastly, closely allied to the vertical mobility is *social mobility* from one social grade to another. This is impeded by social and wealth barriers and to some extent by caste or trade union or professional restrictions on the choice of occupation.

The caste system in India exercises a considerable influence on mobility of labour of all kinds, especially the vertical and social mobility of labour.²

In the modern world the mobility of labour has in recent years considerably increased due to the development of automatic machinery, which has lessened the importance of specialized skill, the greater adaptability of the worker following the spread of general education, and the development of cheap transport, vocational guidance offered by the State, and the advice given by Employment Exchanges. In spite of human and natural limitations on the mobility of the workers, the latter is 'sufficient in most countries to make possible a very large measure of adjustment in response to changes in econo-

¹ See ch. xiv.

² See our *Elements of Indian Economics*, ch. 1.

mic conditions' which provide 'incentives through the price-mechanism for labour to move between occupations, industries and places'.¹

SUMMARY

Labour is any human effort undergone for the sake of wealth-production and resulting in wealth-production. It may be physical or mental or a mixture of both. It may be of a highly responsible kind or it may be practically free from responsibility. Modern industry requires steady continuous labour which is felt to be irksome and which, therefore, would not be forthcoming without the inducement of wages. Labour can be viewed subjectively or objectively. The subjective view is that of the labourer himself, who thinks of the sacrifice and discomfort of working. The objective view is that of the employer, who is interested not in the amount of discomfort undergone by the labourer but in the quality and quantity of the work done.

The *efficiency of the labourer* depends on his health and strength. This in turn depends upon several factors. First of all, it depends upon his standard of health. In order that this should be satisfactory, the labourer must enjoy an adequate income and must know how to spend it wisely. Another important factor in this connexion is efficient organization of public health and sanitation.

Education, general as well as technical, is another great factor governing efficiency.

The surroundings at work and at home, a nutritious dietary, rest and recreation, adequate wages and a hopeful atmosphere in which to live and work, are other factors which affect efficiency.

It is sometimes asserted that labour efficiency is a question of race and heredity. It is difficult to dogmatize about this. Generally, however, differences as regards efficiency can be explained sufficiently satisfactorily as being due to differences in environment and education.

So far as the effect of climate on efficiency goes, the highest efficiency is developed in regions with a temperate climate and the lowest in regions of damp heat.

Efficient labour has several advantages and there is a true economy of high wages when coupled with corresponding efficiency. On the other hand cheap labour is dear labour.

Under every given set of conditions there is a certain *size of population* which is economically the most advantageous, so that a decrease below as well as an increase beyond this size will lead to a diminution of income per head of the community in question.

This ideal size of population is called the optimum size, which is not rigidly fixed. The relation between size of population and prosperity was first stated by Malthus, but in unduly pessimistic terms. According to Malthus, population always tends to outgrow the means of subsistence, but the balance is established by the superfluous population being cut off by wars, epidemics, etc. (positive checks). It is open to mankind, said Malthus, to practise moral restraint (preventive checks) and thus to escape much use-

¹ Benham, op. cit., pp. 196-200, and Briggs and Jordan, op. cit., p. 146.

less misery. He was, however, not very hopeful about mankind in general being sufficiently enlightened to adopt moral restraint. Hence the pessimistic tone of his writings.

The *Malthusian theory* has now been supplemented and improved in several directions, e.g. (i) by shifting the emphasis from food to wealth in general; (ii) by the conception of optimum population; (iii) by a recognition of the possibility of human inventiveness coping with increasing numbers without the positive checks coming into action; (iv) by recognizing the importance of public health measures and of economic welfare as checks on the growth of population; and lastly (v) by insistence on birth-control (neo-Malthusian) methods.

Population policy, so far as it is a matter of economic considerations, should be guided by the goal of optimum population. In practice, political or military considerations may affect population policy.

The following formula indicates the factors involved in increase (size) of population: [Birth-rate + Immigration] minus [Death-rate + Emigration] = Net increase of population.

Density of population (i.e. number per square mile) depends on natural conditions and the manner in which men have learnt to use them. High density combined with a high standard of living are characteristics of western countries generally. Industry on the whole supports a higher density of population at a given standard of comfort than agriculture. Mere density affords no sure indication of the position as regards economic well-being.

By *mobility of labour* we understand the freedom of its movement from (i) one locality to another (geographical mobility), (ii) one occupation to another (a) of a similar kind (horizontal mobility) or (b) of different kinds (vertical mobility); and (iii) one social grade to another (social mobility).

In the modern world several factors make for increased mobility of labour and there is a large measure of adjustment in response to changes in the economic system.

VII

PRODUCTION: CAPITAL

§1. **Definition.**—Capital has commonly been defined as *all wealth, other than land, intended for further or future production of wealth*. Even in the earliest stages of human evolution capital makes its appearance. The crudest hunting implement made out of flint or stone is a form of capital. Time and energy have been spent by the savage in fashioning it instead of being spent in obtaining food. With an eye to the future, direct and immediate satisfaction has been sacrificed, with the result, however, that the savage is now equipped with an instrument which will enable him to kill his game and obtain his food with much greater ease and in greater abundance than before. In modern society the forms of capital are very much more varied and complicated, but the principle involved is the same. Unless a community devotes a considerable proportion of its energy and resources to producing capital or 'producer's goods' or intermediate products, instead of devoting itself to the production of immediately consumable goods ('consumer's goods'), it cannot reach more than a very primitive stage of material prosperity. Consumer's goods may be regarded as goods of the 'first order' satisfying wants directly, while capital or producer's goods are goods of the 'second' or 'higher order' (e.g. a plough and the plant for manufacturing it), satisfying wants indirectly.

§2. **Capitalistic production.**—Production of wealth with the aid of capital has been called 'the roundabout process' of production. Böhm-Bawerk illustrates the advantages of the roundabout process by the following example. A peasant requires drinking water. The spring is some distance from his house. He may go to the spring each time he is thirsty and drink out of his hollowed hand. But this is very inconvenient. Besides, he cannot collect and store any great quantity of water, such as he requires for various other purposes. But if he constructs an axe, fells a tree, hollows out pieces of wood and lays them end to end and thus constructs a channel which will bring water straight to his cottage, all his labour will have been more than repaid.

A very much greater result is thus obtained by the roundabout or indirect method, and many highly useful commodities cannot be produced except by the employment of elaborate

roundabout methods. Capitalistic production means production spread over a long period and conducted at various stages by making a succession of advances to labourers. Even such a simple article as a pair of spectacles requires ground and polished glass and a rigid framework, and the processes of manufacture are highly complicated. 'The reason for adopting such a roundabout way of production is a technical one: it is to be found in the fact that indirect production can be more productive than direct production with the same amount of original factors',¹ i.e. land and labour.

§3. Capital and money.—Capital is often confounded with money because it is generally advanced in the shape of money. If, however, money is used for buying articles for immediate consumption by the borrower, it is not capital. It can be regarded as capital only if employed for purchasing machinery and other instruments of production. Capital as monetary or financial capital dominates modern industry and helps the entrepreneur to secure real capital, i.e. auxiliaries or essentials of production, in exchange for it.

§4. The functions of capital.—In the modern economic organization, capital performs the following principal functions:

(i) *Provision of subsistence.*—The wages that have to be paid (e.g. to labour engaged in a factory) ultimately come from the value of its product. But a period of waiting must expire before the finished commodities can be disposed of. In the meanwhile, capital in the form of wages is required to supply food, shelter and clothes in order to enable the workers to maintain themselves. This advance payment to labour is one important function of capital.

(ii) *Provision of appliances or auxiliaries of production.*—Capital is further required to purchase plant and tools, factory buildings, workshops, etc.

(iii) *Provision of materials.*—Lastly, capital is also required for buying the raw materials of industry and stores of all kinds from which to manufacture finished commodities.

§5. Capital depends upon use and intention.—If money or gold or silver is simply hoarded or buried underground, value is no doubt stored, but we cannot call it capital unless it actively participates in producing wealth. Wealth becomes capital only when used for further production of wealth. For example, grain used as seed is capital. But if it is consumed as food, it is not capital. Again, a thing used in an identical manner may or may not be capital according to intention.

¹ Roll, op. cit., p. 180.

Thus grain if it is consumed by the landowner, is not capital. If, however, he uses it to feed his labourers as part of their wages, it is capital.

§6. **Capital and land.**—Land has generally been distinguished from capital as a separate factor of production. The distinction is, however, made to rest on insufficient grounds. In the first place, it is stated that land is a gift of nature while capital is a product of labour ('produced means of production', as it has been called). This contention is not satisfactory, for land in many cases (e.g. reclaimed or irrigated land or garden plots near towns) is as much a product of human labour as any valuable concrete product.

Secondly, it is contended that land is indestructible while capital is perishable. This again is not a valid distinction. The qualities of land are not indestructible, and even the best land may deteriorate and become useless after a few generations of exploitation unless care is taken to replenish its chemical ingredients from time to time. Even location, which gives value to land, is not indestructible as an economic factor. 'The land may remain, but the value may change because of an alteration in its contiguity to a market',¹ e.g. in deserted mining towns.

Finally, it is argued that land is fixed in quantity and man has no control over its supply, while he can control the supply of capital and increase it if necessary. Closer analysis, however, shows that this is a difference in degree and not in kind. 'In the economic sense land is being continually made by reclamation, by improvements, and by developments of transport. It is true that over a long period the elasticity of the supply of capital may be greater than the elasticity of the supply of economic land, but that is a difference of degree only.'²

Land cannot be sharply differentiated from capital and it is by no means easy to say whether a particular utility is land or capital. Indeed, 'we can give to the word capital a meaning wide enough to include land also. Here, as practically in all economic definitions, we are concerned with a more or less conscious extension of a concept whose meaning was originally more restricted.'³ Apart, however, from the traditional view referred to above, economic analysis in its simpler form and the peculiar social consequences of the Law

¹ Seligman, *op. cit.*, p. 305

² Briggs and Jordan, *op. cit.*, pp. 106-7 and 156.

³ Wicksell, *op. cit.*, p. 185.

of Diminishing Returns when applied to land make it desirable to place land in a separate category. Recourse to other lands means recourse to progressively inferior lands in point of location or fertility, while additional supply of capital may mean increased supply of equally good capital, such as a machine or a factory. This peculiarity affects the cost of production, and therefore economic progress may have different effects on land as compared with the great mass of manufactured goods, the prices of which may be lowered in consequence of invention and civilization, as compared to land rent and values.¹

§7. Three aspects of capital.—Capital has three characteristics: (i) revenue-yielding capacity, (ii) productiveness, and (iii) prospectiveness.

A shareholder in an industrial undertaking looks upon his investment as something that will bring him income. If he reflects upon the matter he will realize that the income he is expecting is due to the productivity of capital. But productiveness is an attribute which capital shares with other factors of production. On the other hand, prospectiveness may be regarded as a quality peculiarly belonging to capital. By 'prospectiveness' we mean postponement of immediate consumption for consumption in the future, the sacrifice of present to future utility which is involved in the creation of capital.

§8. Principal classifications or forms of capital.—Various attempts have been made to classify the manifold forms of capital. The following are some of the more important:

(i) *According to the nature of ownership.*—(a) *Private or individual capital* includes everything which is in the exclusive or partial ownership of the individual and which yields income to him. It thus includes his money devoted to business, or deposited with a bank, shares and bonds held by him, his goods which are used instrumentally, his stock-in-trade intended for letting out or selling to others, and the goodwill of his business. (b) *National capital* is the aggregate of the capital owned by the individual citizens and of the collective capital owned by the community or by a Government (e.g. national railways and telegraphs).

(ii) *According to the degree of durability:* *Fixed and circulating capital.*—(a) Capital which can be used only once and exhausts itself in one single use in the act of production is *circulating capital* (e.g. raw materials like coal, cotton,

¹ Seligman, op. cit., pp. 306-7, also ch. xiii.

seed, manure). (b) *Fixed capital* is that which serves for *several* similar productive acts (e.g. a factory, machinery, the railway system).

Fixed capital being comparatively more durable than circulating capital, it follows that the return on circulating capital is immediate, while that on fixed capital is distant. The former must be replaced immediately, the latter at the end of a certain period. Fixed capital is of great advantage in production, and its growth in modern times is the most important cause of the remarkable advance in material welfare which civilized countries have achieved.

(iii) *According to the scope for alternative uses: Sunk capital and floating capital.*—(a) *Sunk or specific capital* is specialized and cannot be easily adapted to an alternative use (e.g. a tunnel or a pit shaft). (b) *Floating or non-specific or free capital* displays a greater degree of elasticity of use and can serve different purposes (e.g. money, coal, fuel).

(iv) *Remuneratory and auxiliary capital.*—(a) *Remuneratory capital* may be regarded as wage capital being devoted to the advance of wages or salaries. (b) *Auxiliary capital* includes various kinds of aids to labour in production such as plant and materials.

(v) *Production (or Trade) and Consumption capital.*—*Production capital* consists of aids to production, such as machinery and materials, while *consumption capital* consists of things like food and clothing, which are consumed by the workers for the direct satisfaction of their wants while they are engaged in production.¹

§9. Creation of capital.—Capital is not an *original* factor of production. It is the joint product of labour and nature. The primitive flint axe of the savage man as well as the tractor of the modern farmer are both the result of labour applied to materials supplied by nature. The existence and the use of capital implies an earlier surplus of production over consumption made possible by postponement of present enjoyment and the desire to provide for the future. The flint axe was made during his leisure hours by pre-historic man, who almost by instinct chose to spend time and energy in providing for the future by fashioning crude implements, instead of wasting his time in idleness. The first step was the hardest, but with the growth of intelligence and foresight, and with the increasing command of efficient tools, further

¹ On the question of the inclusion of necessities of life for labourers within productive capital the reader may consult Wicksell, op. cit., p. 187.

accumulation of capital was rendered easier, and as civilization progressed the stock of capital goods increased enormously, making consumption also much richer and more varied in the long run.

In modern society few persons provide for their future needs directly in the form of the actual goods they are likely to want. What they usually do is to save a part of their income and keep it with banks or, less often, lend directly to those who can make use of it for productive purposes. True *saving* is to be distinguished from *hoarding* which merely involves refraining from expenditure without helping further production.¹ Now most saving is the result of foresight, forbearance and avoidance of waste, but it does not necessarily involve abstinence or sacrifice on the part of the saver. The term 'waiting' is preferable to the term 'saving'. The rich can hardly be said to abstain in the sense of suffering privation. Indeed, some of them cannot help saving, unless they deliberately waste their substance: such savings may be called automatic savings. Effort and sacrifice are involved in the case of the savings accumulated by the middle classes, and much more so in the case of the working and poor classes. However, whether capital is accumulated by the rich or the poor, in both cases there is a *postponement* of enjoyment. Capital is thus the result of 'waiting'. It is sometimes also described as being the result of abstinence. As explained above, however, the word abstinence suggests privation or suffering, and since this suggestion is not justifiable in all cases, it is better to use the more neutral term 'waiting'.

Saving, however, does not directly result in the creation of capital. In our modern society based on a money economy, savings are conveniently held in the form of money and, in countries like England and the U.S.A. where the banking system is well developed, they ultimately find their way into the banks and are by them lent to the business community for making advances to labourers at various stages of production and for purchasing plant, tools and all kinds of materials, or for the repairs and renewals of capital. In modern economic organization there is thus a division of labour between those who save or set aside money means and those who produce the capital goods or replace them with these money means secured through banks. It is obvious, however, that not all savings and investments result in the

¹ See ch. iv.

formation of capital. Loans to spendthrifts or to Governments for *unproductive* purposes like war, result merely in increased and wasteful spending. They cannot be said to help in the making of 'capital'. But fortunately the bulk of the savings in modern society are productively utilized.

§10. **Factors influencing the growth of capital.**—The factors which influence the growth of capital may be considered broadly under two heads : (a) power to save, and (b) the will to save.

(a) The power or capacity to save depends on the *extent of the margin between income and expenditure*. The margin is high in the case of economically advanced countries like England and the U.S.A., but low in the case of economically backward and undeveloped countries like India, where the *per capita* income is very small. The extent of the margin for saving depends upon the natural resources of a country and the use made of them by its people.

(b) Of equal importance is the *willingness to save*, which is essentially a psychological phenomenon. This depends largely upon the *influence of custom*, and *habits of self-control* and of *vividly realizing the future*. As Marshall points out, these qualities are of slow growth, depending much upon the progress of knowledge and intelligence among the people. The strength of family affection is often the chief motive for saving, though sometimes business ambition also stimulates the saving habit.¹

In order that the desire to save should obtain free play certain obvious conditions must be fulfilled :

(i) In the first place, it is necessary that there should be *security of life and property* guaranteed by a strong, stable and just Government. With chronic disorder, or unjust or heavy taxation on capital, people would either spend extravagantly or would simply hoard their wealth. This is what happened in India during many centuries of misrule and disorder and it encouraged the hoarding habit among the people. Conditions today are vastly better in respect of security to life and property and to that extent the obstacle to saving has been removed. *Moderate taxation* is also an essential condition of saving.

(ii) It is also necessary that there should be adequate *facilities for saving and for investment* in the shape of Savings Banks and Investment Trusts, Joint-Stock Banks, Insurance Companies, Co-operative Societies and Provident Funds. One

¹ Marshall, *Principles of Economics*, pp. 224-9.

of the impediments in the way of saving in India is the lack of adequate investment facilities.

(iii) Last but not least is the *influence of the rate of interest*. In the absence of this inducement to save, the volume of savings is bound to shrink. There are always a few persons who are keen on securing a fixed income in the future for themselves or their families and who, contrary to the normal rule, would save less with a higher rate of interest and more with a lower rate of interest. But ordinarily, as Marshall points out, a rise in the rate of interest tends to increase the volume of savings and of capital, and a fall to decrease its amount.¹

§11. Mobility of capital.—By mobility of capital is meant the freedom or readiness with which capital moves from one industry to another, or from one place to another, or from one country to another. Much of the fixed capital that is specific or sunk in a particular industry cannot be shifted easily from that industry to some other. While the prospect of higher remuneration in one particular trade than in other trades draws capital into it, it is not easy to withdraw the capital invested in any trade even if the returns are not adequate. A manufacturer, rather than throw his machinery and plant on the scrapheap at once, would go on producing even at a low rate of profit. But new capital will not flow into such trades, nor will the old capital be replaced as it is rendered useless by wear and tear. Sometimes capital sunk in a particular enterprise (e.g. a tunnel, a pit shaft or a canal) is not useful for any other purpose and cannot be withdrawn for some other employment. Some kinds of machinery and factory buildings can however be put to alternative uses, and here capital has greater mobility. For instance, during the last war many factories were converted into munition-producing establishments and the same conversion is taking place on a much larger scale during the present war, e.g. automobile factories and railway workshops are being converted into munition-works. 'The "purpose" for which a building or plant

¹ *Principles of Economics*, p. 234. As Wicksell points out (op. cit., pp. 208-9), 'the rate of interest has a twofold influence; a high rate *increases* the yield of present saving and consequently its future marginal utility, i.e. the future utility of the last unit of capital now saved; but on the other hand at a given rate of saving, it makes provision for the future more ample and thus *reduces* the marginal utility of future goods for that individual. The latter tendency may even outweigh the former, so that, for certain individuals, a low rather than a high rate of interest may act as a spur to the accumulation of savings.'

was designed is often wide enough to permit considerable variation in the goods and services produced. Thus a building designed as a factory or a shop or an office will often serve equally well for any one of several kinds of factory or shop or office. Many engineering firms are capable of producing a wide range of products and can readily produce more of one kind and less of another.¹ Then again, railway wagons or motor trucks can be used for the transport of almost any kind of goods. The mobility of capital is thus greater than appears on a superficial consideration of the matter. Money is floating capital *par excellence*, and is free to flow into agriculture or industry, a cotton mill or steel manufacture.

Geographical mobility of capital.—In general, capital can move more readily from place to place and country to country than labour can, since it is impersonal, and has no special attachment to any particular place. If it can earn a better return in one place than in another it will be moved from the second to the first. But even so, the movement is not altogether free, especially as between one country and another. Although it is a fact that capital has become more cosmopolitan in our times, it still has to reckon with several impediments, such as lack of international or political security, liability to heavier taxation abroad, the general preference for home investment, and State control over investment. Again, so far as short-term investments of a floating character are concerned, capital moves more readily from one monetary centre like London to another like New York in response to changes in the rates of interest or discount. We shall see later on that the theory of international trade (comparative costs theory) is based upon the assumption of the relatively greater immobility of labour and capital as between one country and another than within one single country.² In India, capital does not move sufficiently readily from one place to another within the country itself. It is also not mobile as between different employments of it. Investments in land, houses and money-lending are favoured, and the inclination to invest in industrial enterprise is relatively weak. Indian investments abroad are practically negligible. Indigenous capital is not even able to meet all the country's requirements, so that a considerable amount of foreign capital has come to be invested in Indian industries. A gradual improvement is, however, going on. This is shown by the growing investments of Indian capital in the country's industries and by

¹ Benham, *op. cit.*, p. 203.

² See ch. xii.

the almost complete repatriation of India's sterling debt with the help of the large sterling balances acquired by India in payment of the extensive purchases of war materials made in India by Great Britain and the allied nations during the present war. In fact certain optimistic observers like the late Sir Basil Blackett have expressed their conviction that the time when Indian capital will overflow the national boundaries and seek investment abroad is not very distant.

SUMMARY

Capital includes all wealth—other than land—intended for further production of wealth. Production with the aid of capital has been called the 'roundabout process' of production. Wealth-production would be negligible and primitive without the help of capital or producer's goods. Capital should not be confounded with money. Money is capital only when turned into (i) instruments of production, (ii) wages, or (iii) raw materials—the supply of which constitutes the threefold function of capital.

The same thing may be capital or not according to use or intention.

Land is usually distinguished from capital on the ground that it is a gift of nature, indestructible and fixed in supply. These grounds are not adequate and the difference between land and capital is found to be one in degree and not in kind. Nevertheless it is useful to place land in a separate category. Capital has *three characteristics*: (i) Revenue-yielding capacity, (ii) Productiveness, and (iii) Prospectiveness (reference to the future).

Capital can be classified in different ways, e.g. (i) according to the nature of ownership; (ii) according to the degree of durability; (iii) according to the scope for alternative uses, etc.

Capital is the joint product of labour and nature, and is the result of saving (i.e. waiting, or postponement of consumption). Savings are made available through the banking system to business men for the manufacture of capital goods.

The following *factors influence its growth*: (i) margin between income and expenditure; (ii) habit of saving and family affection; (iii) security of life and property; (iv) moderate taxation; (v) banking and investment facilities; and (vi) rate of interest.

Mobility of capital (like mobility of labour) is its freedom of movement from (i) one trade or industry to another and (ii) one locality to another. In both these respects capital is comparatively immobile in India, although capital in general has greater mobility than a superficial view suggests.

VIII

PRODUCTION : ORGANIZATION OF INDUSTRY

§1. The entrepreneur and his functions.—We have already mentioned organization or business management as the fourth factor of production. Although organization, or the task of directing an enterprise, is only a kind of labour, it is such an important and peculiar kind of labour that it must be treated separately. Even under simpler forms of economic activity (such as the small-scale farming of his own land by a peasant proprietor, or weaving by an autonomous artisan) some management, judgement and ability are necessary for success. The need for such business ability and direction is particularly urgent when the various factors of production are owned by different persons and come from different places.

Even today we find a few cases of self-sufficient families and small autonomous artisans and farmers supplying all the factors of production themselves, managing their own business and undertaking all risks in connexion with it. But generally in the modern business world, the task of organization, or directing production so as to secure the greatest possible return, is so complicated that the services of a specialized class of people—called by various names such as entrepreneurs, undertakers, or organizers—have come to be essential. The entrepreneurs adventure or undertake the risks of the business. They bring together capital and labour, arrange or engineer the general plan of the business, and superintend its minor details. Looking at business from one point of view we may regard them as a highly skilled industrial grade; from another, as middlemen intervening between the manual worker and the consumer.¹

The functions performed by the entrepreneur fall into two classes :

(i) *Internally*, (a) he undertakes the projecting, engineering and planning of an industrial enterprise. This includes the choice of a suitable site having regard to the advantages of localization of industry,² the raising of capital on reasonable terms, the decision as to the nature of the commodity to be produced and the erection of factory buildings or workshops, etc. (b) He employs on the most profitable terms the various

¹ Marshall, *Elements of Economics of Industry*, pp. 162-3.

² See §16.

factors of production, choosing such quantities of them as are likely to be most effective (on the principle of substitution). (c) He introduces a suitable plan of division of labour and adopts scientific management in order to ensure full utilization of men and machines, and to eliminate waste.¹

(ii) *Externally*, the entrepreneur has to purchase all kinds of materials and supplies. He has to run the risk of market fluctuations. He must closely study them and regulate his policy in the light of his study. He must watch any changes in the tastes and fashions of consumers and arrange for the sale of his product on the most advantageous terms possible.

§2. Essential qualities.—In order to discharge all these functions properly, the entrepreneur must possess foresight, judgement, business shrewdness, ability to select the proper men and to inspire confidence among his deputies. He has been aptly called the 'captain of industry', and like a general in command of an army he must keep one eye on internal discipline and efficiency, and another on external strategy. In these days, the fortunes of different businesses are so closely bound up with one another that the ruin of one often reacts disastrously on a large number of others, causing widespread unemployment, distress and dislocation. In these circumstances, the unfailing supply of the right type of business ability is a matter of the highest importance to society. Considerable risk is inseparable from modern business enterprises because production takes place long in anticipation of demand. And one's most careful calculations may be upset because of a sudden change in demand; or a new invention may render obsolete the old plant which may have been laid down at great expense; or again the machinery may break down, or the essential supplies of raw materials be cut off by war, or the credit machinery may be disorganized. Under such conditions men of pluck and insight are required as entrepreneurs.

§3. Forms of entrepreneurial organization.—The following are the possible different forms of business enterprises or entrepreneurial organization assumed by firms² engaged in an

¹ The entrepreneur has to take decisions regarding the following questions:

(i) What industry shall he enter? (ii) What commodities shall he produce? (iii) What shall be the size of his plant or plants? (iv) What shall be the size of his firm or the size of his output? (v) What methods of production shall he adopt? In other words, in what proportion shall he combine the various types of labour or other factors? (vi) Where shall his plant or plants be located? (For further particulars, see Benham, *op. cit.*, pp. 177-9.)

² The firm is a collection of factors—land, buildings, plant and equipment,

industry or business: (i) Sole Trader or Producer, (ii) Partnership, (iii) Corporation or Joint-Stock company, (iv) Trust, (v) Government or State enterprises, (vi) Co-operative production, and (vii) Profit-sharing.

We shall describe these briefly.

§4. Sole trader or producer.—Business enterprise originally began as the enterprise of individuals, and although this is now steadily giving way to associated enterprises as in joint-stock companies, even today some businesses are conducted as personal businesses by sole producers. The producers may contribute their own land, labour or capital, or borrow some of the capital and employ a certain amount of hired labour, but they take the whole risk themselves and of course take all the profits. Instances of such 'one man concerns' are the peasant proprietor or ryot, independent artisans like weavers and tailors, and retail traders. Greater personal interest in the business and better attention to the needs of the consumers are the principal advantages of this type of business over others. Its scope, however, is necessarily limited. It is most successful where the market is local, the demand regular and competition not excessive.¹

§5. Partnership.—This is an association of a limited number of persons who carry on business jointly for profit. It is the oldest and the simplest plan for renovating the energies of a business by taking into partnership some of its ablest employees and thus joining interest with responsibility. Two or more persons may combine their resources for carrying out a large and difficult enterprise, so as to increase the efficiency of the unit. Sometimes there is a division of labour between the 'active partners', who actually direct the business, and 'sleeping partners' who only supply capital. Or some of the partners may attend to the internal and others to the external affairs of the firm. Such partnerships are found among traders, solicitors and small manufacturers. The partnership is a virile and elastic form of business, and has played a very important part in business organization in the past.² In India, many businesses are still carried on as partnerships, the partners often being members of the same family.

workers, materials, and so on—controlled by an "entrepreneur".—Benham, *op. cit.*, p. 164.

¹ S. E. Thomas, *Commerce, its Theory and Practice*, p. 50.

² 'This form of entrepreneurial organization is well-suited to the business of solicitors, accountants, estate agents, doctors, and the like, and is very prominent in these professions.' Benham, *op. cit.*, p. 169.

The partnership as a form of organization, however, suffers from the following drawbacks :

(i) The personal trust is limited to a few. (ii) The supply of capital and ability available under a partnership is often inadequate. (iii) The unlimited liability of every partner for all debts of the firm hampers enterprise. (iv) There is absence of continuity, caused by the death, bankruptcy or retirement of partners. (v) Disharmony among partners is a frequent cause of trouble.

§6. Joint-stock company.—This is the typical form of business enterprise today and is tending to push out the other forms, thanks to the rapid expansion of large-scale undertakings of all sorts, in manufacture, mining, transport, banking, trading and even in farming of the type ushered in by the Industrial Revolution. Its progress was facilitated in England by the recognition of the principle of limited liability about the middle of the nineteenth century. The joint-stock company is an association of shareholders who subscribe to its capital, which is divided up into fractions, usually of small value, called shares. The shares which are transferable carry with them limited liability—usually limited to the face value of the share—the right to a dividend or a share in the profits when sanctioned by the directors, and a voice in the management in proportion to the shares held. Besides such *ordinary shares*, the corporation may issue (i) *preference shares*, carrying a certain fixed dividend from profits, if any, to be paid before any dividend is paid on the ordinary shares, and (ii) *founders' or deferred shares*, entitled to receive a certain proportion, usually a large one, of the profits, only, however, when these reach a certain minimum and also only after payment of a fixed rate of interest on *debentures or bonds* and the dividend on ordinary and preference shares. The bonds are pledged against the properties of the company and bear a fixed rate of interest. The bondholders are thus the creditors of the company and their claims constitute the first charge on the profits and assets of the company. The joint-stock company by these various market devices tries to attract capital from a large number of persons having different degrees of investment preferences relating to income, safety, etc. In this connexion, the terms 'Nominal or Authorized Capital', 'Subscribed Capital' and 'Paid-up Capital' may be explained. The *authorized capital* of a joint-stock company is the total nominal value of the shares authorized by the Memorandum of Association (which is a statement of the company's powers

and objects). The *subscribed or issued capital* is the nominal value of shares actually issued to or subscribed by shareholders. The *paid-up capital* is the total amount called up from the shareholders and paid into the coffers of the company. The shareholders in a joint-stock company are mostly sleeping partners, the active management being entrusted to a Board of Directors elected at annual meetings of shareholders, and to salaried managers. The joint-stock company or corporation is a fictitious person in the eye of the law, but unlike an individual person it enjoys the advantage of unbroken existence and may live for an indefinite length of time. It is entitled to certain privileges; for instance, it can own property and enter into contracts. It can also sue and be sued.

The advantages of joint-stock enterprises.—(i) The principal advantage is that large-scale operations or enterprises, which formerly could be undertaken only by the State, are now possible to individuals who can combine their resources to build, say, a railway, or start a cotton mill or iron works. The joint-stock company is thus enabled to command all the advantages of large-scale production, such as the employment of highly-paid experts, the introduction of up-to-date machinery, and specialization. (ii) The division of a large total capital into a number of small shares carrying limited liability, facilitates the utilization for investment of small savings. (iii) The facility of transferring one's shares by sale spreads the risks widely and allows control to pass into the hands of the most competent and those who have faith in the enterprise. (iv) The corporation enjoys stability owing to its continuous existence, and can plan far ahead and for distant returns. (v) A well-conducted and resourceful corporation can offer stable employment and unusually satisfactory conditions of work to its employees. (vi) The management is efficient, being centralized in the hands of a small Board of Directors, who are generally persons well versed in the intricacies of modern business.

The disadvantages of joint-stock enterprises.—Nevertheless the corporate form of industry is liable to be greatly abused and is exposed to serious dangers. (i) In the first place, the corporation is an inferior kind of association as compared to the partnership, since it is an impersonal association of a large and scattered body of shareholders unknown to each other. Adverse critics have said that it is merely an association of 'money bags' and that it leads to the evils of

absentee capitalism, exploitation of workers and other abuses. The masters of the business (i.e. the shareholders) are too numerous and cannot possibly take an active hand in the business because most of them have some other occupation of their own on which they depend for their livelihood. (ii) The transferability of shares opens out dangerous possibilities of ill-advised speculation or gambling in shares on the stock exchange by ignorant laymen or unscrupulous speculators. (iii) The promoters, directors and managers cannot be effectively controlled by shareholders, and being in possession of inside knowledge often play the game with 'loaded dice', defrauding innocent investors. (iv) Other dangers are over-capitalization, the rise of monopolistic combinations, and political corruption—especially in a democracy.

On the whole, however, the advantages of the joint-stock form of organization outweigh the disadvantages. We cannot, therefore, dispense with it under present conditions. Greater publicity, proper auditing of accounts, suitable measures for increasing the responsibility of promoters and directors would minimize its disadvantages.

§7. **Trusts.**—A further stage in the corporate form of industry is reached when a number of joint-stock companies unite together to form combinations known as 'Trusts' in America and 'Kartells' in Germany. We shall deal with the whole Trust problem later in the chapter.¹

§8. **State enterprises.**—Under the influence of socialistic ideas regarding the functions of the State, the active participation of the State in the management of industry has been steadily increasing. Thus we have State railways, State forests, State roads and State canals in India. In western countries, what is known as Municipal Trading or Municipal Socialism, is steadily on the increase. Municipal corporations own and manage theatres, waterworks, street tramways, electric supply, etc. How to ensure adequate control on the part of the taxpayer, how to secure a proper choice of officers, how to avoid serious inroads on the free initiative of the individual, which is the mainspring of progress—these are some of the problems to be tackled in this connexion.² In Russia, all enterprises, including farming, are now collective enterprises managed by the State.

§9. **Co-operative organizations.**—In order to overcome the drawbacks of the capitalistic types of business organization (such as waste, exploitation of workers, absence of any voice

¹ §§27-9.

² See ch. xvii.

in the management to workers, and denial of any share in the profits to them) on the one hand and of State enterprises on the other, some social reformers have proposed the adoption of the co-operative type of organization. It is claimed that co-operation avoids the drawbacks of both capitalism (e.g. excessive individualism and self-interest) and of socialism (e.g. too great a suppression of the individual, and excessive interference on the part of the State). It keeps alive the stimulus of self-interest, but reconciles it with the common interest. Under co-operation, competition between worker and worker is eliminated, the workers being the shareholders, undertaking the risks of the business and sharing the profits. They possess the power of voting at general meetings and take their part in laying down broad lines of policy and choosing officers to carry it out. They are thus the employers and masters of their own managers and foremen, and render unnecessary some of the minor work of superintendence that is required in joint-stock capitalistic establishments. 'Each for all, and all for each' is their motto. Each member is expected to give to the society the best that lies in him. While the principle of co-operation has been successfully applied to consumers' stores and credit societies, it has not so far made much progress in the production of wealth on a large scale, which is today mostly organized on capitalistic lines. The co-operative association for production labours under several handicaps. There is a dearth of business ability among the workers themselves. The employers are not always the best possible masters of their own foremen and managers; the majority of members being manual workers are unwilling to pay large salaries to those who work with their brains; nor are they always able to find all the capital that is essential for large-scale industry.¹

§10. **Profit-sharing.**—This is a modification of the capitalistic type of enterprise and is intended to enlist greater willingness, zeal and efficiency on the part of workers, to avoid friction, and to attract workers of more than average ability and industry. Under a profit-sharing scheme, a private capitalistic firm or company, while retaining in its own hands full control of the business, agrees to pay its workmen, in addition to their wages, a share in the net profits as well, when these reach a certain minimum. But unfortunately in their actual operation, profit-sharing schemes have failed of

¹ The various types of co-operative activities in India are discussed in our *Elements of Indian Economics*

their purpose and do not seem to evoke much enthusiasm either on the part of the capitalist employers or of the workers. The employers on the whole dislike the idea of sharing profits with their workers, and the workers are inclined to look upon the share allotted to them as a sop thrown to them while they are still denied any real voice in the management.

This review of the principal forms of business organization reveals the great variety of types that have been evolved to suit conditions of different times and different trades. It is, of course, wrong to infer that any one type has been wholly replaced by any other. As a matter of fact, today all these types are simultaneously in operation. Though the joint-stock type is the leading form of organization, the sole producer or trader still thrives not only in the less advanced countries like India and China, but even in the more advanced countries of the west. He continues to hold his own in such businesses as tailoring, retail shopkeeping, farming, printing, plumbing, etc. State undertakings and co-operative enterprises are also widening their spheres of activity.

§11. Forms of division of labour.—(i) *Division of employments.*—In a rudimentary stage of economic development the wants of men are few and simple, and each man is sufficient unto himself and satisfies practically all his needs by his own personal labour. But very soon specialized occupations begin to appear. Each man, instead of being his own blacksmith, carpenter, barber, tailor, doctor and so on, devotes himself entirely to one or other of the different occupations. He offers his own services in exchange for the services of others pursuing other occupations, and this is a far more satisfactory arrangement than everybody doing everything for himself.

(ii) *Division of processes within an employment.*—A further stage is for each employment to be split up into a number of processes. In his famous description of the industry of pin-making, Adam Smith describes how 'one man draws out the wire, another straightens it, a third cuts it, a fourth points it, a fifth grinds it at the top for receiving the head'. He notes how 'the important business of making a pin is in this manner divided into about eighteen distinct operations, which in some manufactures are all performed by distinct hands'. The result of such specialization (which has advanced very much further than in Adam Smith's days) is that the same number of workmen can, in a given time, turn out a vastly increased quantity of the product.

§12. Advantages of division of labour.¹—We may thus note that the greatest advantage from division of labour is greater plenty and cheapness of the goods produced.

(i) Labour becomes more effective, because (a) the time of the workman is not lost in passing from one job to another; (b) work can be assigned according to ability, the more skilful workmen doing the more difficult parts of the work, and the less skilful doing the less difficult. Superior ability is not wasted by being partly employed on work of an inferior character (incidentally the inferior men need not be refused employment, for they can be asked to attend to the easier processes); (c) the loss due to mishandling of expensive machinery is minimized by choosing the more careful and competent workmen for operating such machinery; (d) such skill as each workman possesses is further enhanced because of his concentration on *one* type of work instead of diffused attention being given to a number of perhaps widely different processes.

(ii) Apart from the improvement in the efficiency of the workmen, industry gains in efficiency in other ways. (a) Costs are reduced because a smaller equipment of tools and implements is required. It is not necessary to provide each workman with a complete set of tools but only those appropriate to his particular specialized task. This is a consideration of great importance in the present industrial system based on the elaboration and expensiveness of the instruments used. Similarly there is economy as regards space, light, etc. (b) But far more important is the consideration that division of labour promotes invention. There may be persons whose special business it is to watch the various operations in an industry and suggest improvements. Their ranks are increased by the addition of the workmen themselves engaged on these operations. Continuously going through the same set of movements required for some simplified task, they have much greater opportunities for detailed observation and for thinking out better ways of doing the work. Employers often offer special bonuses for useful suggestions made by their workmen. (c) Invention is also promoted in another sense. When a complicated operation is divided and subdivided, each of these subdivisions tends to become automatic and mechanical, and this is exactly the sort of thing a machine can do just as well and indeed better than any human being. (d) From the standpoint of the workmen themselves it may be noted

¹ On this question the reader may consult D. H. Robertson, *The Control of Industry*, pp. 15-17.

that since division of work increases their efficiency, their wages are likely to rise. They are further likely to benefit as consumers owing to the general cheapening of goods. Again, because the subdivided processes are simpler, no prolonged period of training or apprenticeship is necessary for the ordinary workman.

§19. Disadvantages of division of labour.—Those who talk of the disadvantages of division of labour have in mind not the differentiation of occupations (for this they would agree is a mark or necessary condition of progress), but the splitting up of each industry or occupation and the specialization of workers in these little uninteresting segments. They are also thinking of the evils of machinery and large-scale production, because these are generally associated with division of labour in modern industry, and it may be worth while pointing out that some of the faults commonly laid at the door of division of labour belong to these other logically separate characteristics of modern business.

Objections to division of labour all aim at showing that it worsens the position of the labourers.

It is commonly urged that (i) it reduces the worker to an automaton. As one writer asks: 'What can be expected of the mind of a man whose activities are constantly devoted to making the eighteenth part of a pin?' A man who makes a whole shoe himself may find some interest in his work, and in his humble way experience the joy of artistic creation. But how can he be made to feel any interest or pleasure, if for hours together every day he has to do nothing except, say, punch holes in leather by means of a machine? He is not required to use his brain, which therefore gets numbed. Very often he does not understand the meaning of his work or how it fits into a well-thought-out scheme for combining the result of his labour with that of other 'specialists' like himself who together give the world a good serviceable article.

The monotony of 'machine minding' is no doubt generally exaggerated, and probably there is also a tendency to exaggerate the interesting character of the work of the average craftsman of the old type. We must also not forget that a good deal of the work under modern conditions involves the exercise of intelligence and judgement. For example, it is generally accepted that the scarcity of *skilled* labour is one of the reasons for the present backwardness of India in industrial development.

Lastly, we must remember that when a piece of work

becomes purely mechanical, a machine is generally invented to do it, and human labour is released for more intelligent work.

However, after all these allowances are made, it remains broadly true that, *owing to division of labour, work becomes on the whole more monotonous and uninteresting*. The worker also has a greater feeling of being driven. For example, the man who is doing the upper part of a shoe must do it at a rate which bears some reasonable relation to the rate of the man doing the lower part. Also, when a workman has to deal with a machine, he has to keep up the pace set by the machine, which does not get tired like a human being.

(ii) Another evil commonly said to follow from division of labour is that the workman, being overspecialized, is not able to take up any other work if there happens to be depression or unemployment in his own trade. Immobility of labour is increased, and so the problem of dealing with unemployment becomes more difficult.

This, however, runs counter to what we have said above about a prolonged period of apprenticeship and training being no longer necessary under the present system of division of labour. If a man finds there is no work for him in one industry, he should find it comparatively easy nowadays to fit himself for employment in some other industry, because division of labour which prevails in all the industries means simplification of the work to be performed by each workman. Even if it is dissimilar from industry to industry it can be easily learnt; and often it is similar, especially when the use of machinery is common in all industries. Operatives in a watch factory, for example, would find themselves at home among machinery used in the lighter metal trades.

(iii) It is further argued that under division of labour, the worker loses his sense of responsibility. So far as this is true, however, it is not the effect of division of labour but of the fact that the worker has no proprietary interest in the business. If, on the other hand, it is suggested that the labourer can shirk work without being noticed, this again is not true, the complaint on the contrary being that the worker feels he is driven too fast under the present system.

(iv) Another evil associated with division of labour and specialization of workers is the increased liability to industrial disease, e.g. the risks of lead poisoning and tuberculosis which are inherent in certain processes in pottery manufacture.¹

¹ Dearle, *op. cit.*, p. 178.

(v) The social, moral and physical evils of the factory system and the overcrowding in industrial centres are often mentioned as being among the disadvantages of division of labour. Strictly speaking, however, the two things are separate. For instance, a task may be subdivided and each subdivision entrusted to a worker working in his own cottage.

(vi) Similarly, the evils of machinery, such as they are, should not be attributed to division of labour as such. The two have no doubt gone together, but, as Marshall points out, 'the connexion is not so close as generally supposed. It is the largeness of markets, the increased demand for great numbers of things of the same kind, and in some cases of things made with great accuracy, that leads to subdivision of labour; the chief effect of the improvement of machinery is to cheapen and make more accurate the work which would anyhow have been subdivided.'

(vii) Lastly, the disappearance of the personal bond between the employer and the workers is commonly regarded as another unfortunate result of division of labour. The chain of causation may be stated as follows :

Division of labour → many tasks → many workers
→ impossibility of maintaining a personal relation with each of them.

Or again :

Division of labour → large-scale production → large capital → joint-stock organization, i.e. a corporate employer instead of an individual employer, ∴ impossibility of a personal bond.

§14. **Limitations of division of labour.**—Division of labour results in a great expansion of production. It is useless if there is no correspondingly wide and continuous demand to take off the increased supply of goods. Division of labour, therefore, is limited by the extent of the market.

Again, specialization or division of labour cannot proceed very far in a community whose wants are few and relatively simple.

Division of labour is also limited by the nature of the employment, as pointed out by Mill. 'Agriculture, for example, is not susceptible of so great a division of occupations as many branches of manufactures, because its different occupations cannot possibly be simultaneous. One man cannot be always ploughing, another sowing, and another reaping. A person who practised only one agricultural operation would be idle eleven months in the year.'

§15. Machinery: its advantages and disadvantages.—We may now treat the issues raised by machinery at greater length. Since the Industrial Revolution in England in the latter half of the eighteenth century, more and more we have been living in an age of material invention and technical progress. Industry, transport and even agriculture are fast being mechanized, transforming the social and economic order of society.

Advantages of machinery.—(i) The greatest and the most obvious advantage of machinery is that it enormously increases the productivity of human labour. If instead of merely scratching the soil we use a plough, the yield will be very much greater. The plough is a simple device, whereas much of the machinery employed in modern industry is far more complicated. But the underlying idea of both is the same, namely increase in productivity. With the expenditure of the same amount of human labour, much more wealth is produced, and therefore machinery may be said to add to human welfare.

(ii) Machinery increases the demand for general intelligence, although it displaces purely manual skill or dexterity of the old type.

(iii) It largely removes the barriers between different trades and promotes the mobility of labour. For example, a worker in a watch-making factory can without much difficulty secure a job in the lighter metal trades since the general nature of the machinery is similar in the two trades.

(iv) It relieves the strain on human muscles by performing very heavy tasks.

(v) It lessens human drudgery by taking over monotonous tasks, such as copying, or the folding of papers.

(vi) It makes possible the employment of workers of average strength and ability on work which formerly required exceptional skill or strength.

(vii) It performs work much more regularly, quickly and accurately than would be otherwise possible.

(viii) It excels both in the performance of exceedingly heavy tasks and exceptionally delicate ones.

(ix) It promotes standardization of goods and the production of identically interchangeable parts and thus facilitates the use of machine-made machines (e.g. tractors, pumps, or a motor-car engine).¹

Disadvantages of machinery.—"The earliest reactions of

¹ For a fuller discussion of the principle of standardization, see Robertson, *op. cit.*, pp. 18-22.

both theory and practice produced an attitude antagonistic to the technical improvements. The first days of the introduction of machinery saw a series of violent conflicts.' For instance 'the Luddites, the machine-wreckers, were the expression of this workers' struggle against the competition of mechanical contrivances'.¹ Critics like Ruskin looked upon machinery as the greatest curse of the modern age. There are still people of this mode of thinking, who would like the world to revert to the domestic system of industry.

(i) It is argued that machinery is detrimental to the working classes, since it displaces human labour and throws large numbers of them out of their jobs. There is no doubt that this is the first or initial result of machinery, as witness the supplanting of the hand-loom by the power-loom, the bullock-cart by the bus, and the plough by the tractor. In the end, however, machinery creates more employment and absorbs the displaced labour. It reduces costs and makes things cheaper, and thus stimulates demand. The cheapness also increases the savings which people can make, and thus the supply of capital is enlarged. All these things mean more business activity and more demand for labour. The hardships of the period of transition, when labourers suddenly find themselves without employment, are very real, however, and every effort must be made to minimize them. A similar objection is raised today against rationalization of industry, and explains the hostile attitude of the average worker towards it. The more enlightened labour leaders, however, are not opposed to machinery as such but to its private ownership and to the freedom enjoyed by the capitalist to use it in a way detrimental to the working classes.

(ii) Machinery, it is argued, makes labour monotonous. As against this contention it may be pointed out that monotony and drudgery were not altogether absent from the old ways of working without complicated machinery. On the other hand, machinery makes possible shorter hours of work, and workers have opportunities of utilizing their leisure pleasantly and profitably. This must be regarded as a substantial compensation for the monotony and drudgery of the working hours.

(iii) Machinery has adversely affected the skilled craftsmen, who under its regime have degenerated into semi-skilled machine operators.

(iv) It is also said that hand-products are superior to

¹ Roll, op. cit., pp. 227-8.

machine-made goods. This objection, however, is valid only in those cases where individual tastes have to be satisfied or artistic production is concerned. Besides, much handwork is ugly, e.g. Indian toys; while machine-made products may be beautiful if the design is artistic.

(v) Finally, it is argued that machinery is responsible for the evils of modern industrialism and the capitalistic system, such as the exploitation of female and child labour, loss of economic and social independence by the worker, and narrow specialization.

As said above, however, many of these abuses might be either prevented or remedied by appropriate social legislation. ✓ We cannot do without machinery if we want to maintain our standard of living and the general advance of civilization.¹

§16. Localization of industries, or territorial division of labour.—Like individuals, particular localities are found to specialize in certain industries. This development may be influenced by *permanent and natural factors*, such as availability of raw materials and cheap labour, transport facilities, nearness to markets, a suitable climate (e.g. a moist climate is advantageous for cotton spinning), availability of cheap capital and credit facilities. These factors fall into two broad groups; first the factors which determine where the transport costs involved will be at a minimum, second the factors which make for lower costs of production at some places than at others. From the point of view of transport costs, production will be either at the source of material or at the place of consumption, according as the material or the finished article is the more expensive to carry. Minimum total transport costs alone will not, however, prove decisive in determining the place of production, as the influence of cheap supplies of factors of production such as land, labour, capital and management has also to be reckoned with.² Localization of industry may also be due to what may be called accidental factors. A

¹ For a discussion of the controversy in India centring round the *charka*, see our *Elements of Indian Economics*, ch. iii. For a lucid analysis of the modern view of the results of technical improvements in relation to the total product and its distribution (i.e. the prices of the factors of production), see Roll, *op. cit.*, pp. 230-7. It is generally agreed that technical progress will cause an ultimate increase in the total product, but that inventions are likely to alter the relative shares going to the factors and their absolute shares. 'The problems caused by inventions which raise the marginal products of factors in unequal proportions are the most interesting.'

² E. A. G. Robinson, *The Structure of Competitive Industry*, pp. 145-53.

pioneer who starts a new industry happens to choose a particular locality, when he might just as well have chosen some other. And when he succeeds, other people establish similar industries in the same place.

When, for whatever reasons, an industry becomes localized in a particular place it tends to remain there, partly because it develops certain special advantages denied to other localities, and partly by sheer force of inertia. 'Localization of this kind shows an astonishing persistence in survival.'¹

The advantages of localization are known by the name of 'external economies' and they may be summarized thus :

(i) Where a large number of establishments of the same type are concentrated, a number of subsidiary industries spring up for supplying tools and accessories to the main industry, doing the necessary repairs, or preparing the raw materials for it.

(ii) Specialized means of transport and communication may develop so that the industry can market its products and secure its raw materials easily and cheaply.

(iii) Similarly, institutions like Banks and Stock Exchanges may come to be established, as in Bombay and Calcutta, and be of great use in providing capital for the industry and in marketing securities based upon it.

(iv) Skilled workers such as may be required for the industry naturally congregate where there is likely to be a constant demand for their skill. The industry benefits because it can choose the best men.

(v) Just as it is a good thing for the progress of learning that there should be a number of colleges in the same place, so it is a good thing for the progress of an industry that there should be a number of similar establishments in the same locality, so that it is easy for them to compare notes and learn from each other. Under these conditions improvements are rapid, and much of the knowledge concerning the industry is imbibed unconsciously and automatically. Such conditions are also favourable to the establishment of technical journals and of technical institutions and the promotion of research.

Disadvantages of localization of industry.—The main disadvantage of localization is that the economic prosperity of the locality comes to be bound up too closely with the fortunes of the one main industry. If anything should go wrong with the principal industry, the whole district may be faced with starvation as there is no other work to fall back on. Thus,

¹ Robertson, op. cit., p. 30

the prosperity of the city of Bombay depends largely on the prosperity of its cotton mill industry, and since this, in recent years, has not been doing well, the position of the city seems to be steadily deteriorating. A possible remedy lies in the establishment of supplementary industries.

§17. Decentralization of industry.—Side by side with localization of industry we find that there are certain forces in the modern economic organization which are making for the dispersion rather than concentration of industry, as witness the shifting of the cotton mill industry in India. It was formerly confined to the town and island of Bombay, but has now been established at several up-country centres like Ahmedabad, Sholapur, Hubli, and also at Nagpur, Madras and Cawnpore.

The causes are obvious. (i) The heavy rents in crowded cities like Bombay, higher wages of labour, higher municipal and central taxation and high costs in general, counteract the advantages of localization and force the industry to disperse. (ii) The vicinity of raw-material-growing areas and of the markets also favours decentralization of industry. The tendency has become all the more pronounced owing to modern improvements in transport, especially in motor transport. (iii) The practicability of conveying cheap electrical power over long distances has made it unnecessary for industry to be always localized near coal-mining areas. It is now often feasible to establish it in the open country in healthy surroundings.

It is also clear, however, that decentralized or scattered industrial concerns cannot readily command the facilities that are available to localized industrial establishments in the matter of skilled labour, credit facilities, etc. So it is all a question of balancing the various gains and losses. Sometimes it may pay to start an enterprise where the industry is already well established. At other times, it may on the whole pay to choose some other locality.

§18. External and internal economies.—The consideration of the advantages of localization of industry leads us to that of the distinction between the external and internal economies of a business and of large-scale production. Marshall divides the economies arising from an increase in the scale of production of any kind of goods into two classes: (i) the external economies, and (ii) the internal economies.

(i) *External economies* are dependent upon the general development of an industry either in a particular locality or country or the whole world. These are best secured by the concentration of many small businesses of a similar charac-

ter in particular localities. The economies arising from the localization of industry come under the heading of external economies. They are so called because they are dependent on external conditions and independent of any individual business or establishment and of its resources.

(ii) *Internal economies* are those that are dependent on the resources, technical organization and efficiency of management of individual firms. They arise within the establishment concerned and are therefore called 'internal'. (See §20.)

§19. The tendency towards large-scale production.—Internal economies depend largely upon the adoption of a sufficiently large scale of production. Before the Industrial Revolution, under the domestic system of industry, the small concern was the type; the large business unit was the exception. But things have changed since then. More and more capital and labour tend nowadays to be massed in individual business units, leading to an increase in their size or scale of operations. While the average number of persons employed, the output and the capital have been steadily expanding, the total number of individual establishments either remains stationary or at times even decreases. The size of an establishment is influenced by several factors, such as the nature of the industry, the nature of the markets, the available business ability and capital. Some businesses, such as those connected with the manufacturing and transport industries, have to be organized on a large scale to secure the best possible results. Thus a cotton mill or a railway can be run with advantage only on a large scale. The cost of machinery, plant and equipment are so heavy that the industry must be organized on such a scale that the heavy fixed charges are spread over a large output. On the other hand, extractive industries in general, like farming and fishing, being more subject to the Law of Diminishing Returns, do not readily admit of expansion of scale.

The extent of the market or demand is another factor. Where the demand is regular and comes from the masses, production can be standardized and organized on a large scale, as in the case of cloth or hardware goods. But where the market is limited, or where the tastes of individual consumers must be catered for (as in the case of special types of saris required by Indian women or special types of utensils, etc.), the scale of business is necessarily restricted. On the whole, the tendency towards large-scale production is striking.

§20. Economies of large-scale production.—Let us now formally enumerate the principal advantages of production on a

large scale, i.e. the internal economies of a business establishment.

(i) A system of minute and efficient division of labour can be adopted, and specialized experts of the highest capacity can be employed with advantage.

(ii) Considerable savings can be made in the general expenses, e.g. in the overhead or standing charges, called the 'on-costs' or 'supplementary costs' of production. These costs do not increase in proportion to increases in the size of the business. One engineer and one watchman will do just as well for a comparatively large factory as for a small one. Rent, insurance and taxes are other charges which do not increase proportionately.

(iii) Expensive and up-to-date machinery and plant can be introduced with advantage since it can be continuously used if production is on a large scale. Cheaper power is also another advantage.

(iv) Economies of buying and selling can be made owing to the greater bargaining power of a larger business unit, and its greater reputation. There is also a saving of freight. Both selling and buying in large quantities are thus economical.

(v) Effective advertising and publicity.—Extensive and scientific advertising of goods is essential in these days. But it is also expensive. Only a large firm can afford it because, the expense being distributed over a large output, the increase in cost per unit is small.

(vi) Utilization of by-products.—This is not possible when the scale of operations is small; and the by-products, because they are not sufficient in quantity, are simply wasted. If, however, the scale is sufficiently large it will be worth while erecting a special plant to treat the waste products. For example, the scrap material in engineering shops or the saw-dust in saw mills or the coal gas in the coking process can be manufactured into something useful and marketable.

(vii) *Other advantages* of production on a large scale are : (a) Greater possibilities of conducting research and experiments; a small firm cannot afford to make costly experiments, some of which may fail. (b) Comparative freedom from trade and market fluctuations. (c) Better credit and a larger turn-over of capital.

(viii) *The consumer also stands to benefit*, because goods are sold cheaper as the costs of production are lower.¹

¹ The economies of large farms are similar to those of large-scale production in manufacture, i.e. better farm equipment and division of labour, economical

§21. Limitations of large-scale production and optimum size.

—We have already noticed cases where production has to be on a small scale. But even where the scale must be large, there is a limit beyond which the enlargement should not be allowed to proceed. The limitations of large-scale production arise from the infirmities of human nature and the increasing difficulties of management and supervision (which are specially great in agriculture, where the operations are spread over a large area). A point of maximum returns or optimum size of the firm is reached sooner or later, beyond which the enterprise or the firm becomes too cumbersome and unwieldy; and leakage, inefficiency and waste result. Personal interest and supervision become impossible. The task of supervision has to be delegated to paid men who must themselves be watched as they have no personal interest in the business. An elaborate system of checks and counterchecks becomes necessary, involving waste and red-tapism. Even the most capable entrepreneur will find that after a point further expansion will diminish his income by increasing his total cost more than total receipts. As soon as these disadvantages begin to manifest themselves it is desirable to start, say, another cotton mill, rather than to expand the existing units indefinitely and face diminishing returns.

After a certain scale of production has been exceeded direct contact between the employer and the employed becomes impossible. This is a fruitful cause of friction and misunderstanding, strikes and lock-outs.

The difficulty in the matter of commanding an adequate supply of high business ability and adequate capital, which are essential for the conduct and management of big concerns, is another check to large-scale production.¹

A concern may grow so large as not to allow any changes in its structure, or in the direction of its effort, to take place. Such lack of adaptability may lead to serious consequences to itself and to others.

Lastly, it may be added that the tendency towards large-

use of expensive machinery and implements, lower marketing costs, scientific rotation of crops and experimental work.

¹ For a detailed analysis of the concept of the *optimum firm*, the reader is referred to Robinson, op. cit., ch. II. 'By the optimum firm, we must mean that firm, which in existing conditions of technique and organizing ability has the lowest average cost of production per unit, when all those costs which must be covered in the long run are included. The forces which determine the best size of the business unit, assuming that the market is sufficient to

scale production often results in the formation of vast monopolistic combinations.¹

§22. Small-scale production (petty industry).—We may now explain the advantages of small-scale production or 'petty industry', which still persists even in industrially advanced countries like the United Kingdom, the U.S.A., or Germany, and is certainly very important in a country like India.

In pointing out the limitations of large-scale production we have incidentally indicated the advantages of small-scale production.

Small-scale production ensures personal interest and supervision on the part of the producer, attention to detail, perfect knowledge of customers' individual needs and direct personal contact between the employer and the workers.

Small-scale production of the old domestic industry type secures the economic independence of the workers and thus avoids the evils of industrial disharmony. If a number of small concerns co-operate, they also can secure those mercantile economies in buying and selling goods and the credit facilities which are normally available only to the large concerns.²

§23. The Law of Increasing Returns.—The Laws of Returns have already been explained above.³ There, however, special stress was laid on the Law of Diminishing Returns as being appropriate when discussing Land. The subject now is the

absorb the whole production of at least one firm of optimum size, may be divided into five main categories: Technical forces making for a technical optimum size; managerial forces, making for an optimum managerial unit; financial forces, making for an optimum financial unit; the influences of marketing, making for an optimum sales unit; and the forces of risk and fluctuation, making for a unit possessing the greatest power of survival in the face of industrial vicissitudes.' See also Meade, *op. cit.*, p. 105.

¹ See §27. Large farms, like large manufacturing firms, have their own limitations, such as increasing difficulties of supervision over a wide area and limited scope for division of labour. Besides, large agricultural estates give rise to certain social evils such as absentee landlordism, unequal distribution of property and wealth, and agrarian discontent.

² The advantages and disadvantages of small-scale farming are similar to those of small-scale industry. The main advantage is careful personal attention to land and its cultivation. Besides there is the social advantage of wide diffusion of landed property and the political advantage of a large class of sturdy and contented peasant proprietors. On the other hand, the proverbial conservatism of small farmers may hamper progress. In the economic sphere, by the co-operative organization of agriculture it is possible for small farmers to command many of the advantages of large farms.

³ See ch. v, §§8 and 9.

Organization of Industry; and in this connexion the emphasis is on the other two Laws, especially the Law of Increasing Returns. It is no doubt incorrect to divide industries into two rigidly separated classes: (i) manufacturing industries subject to the Law of Increasing Returns, and (ii) extractive industries subject to the Law of Diminishing Returns, since the latter law, as we have already seen, applies to all industries sooner or later and the former applies even to extractive industries under certain circumstances. The broad distinction suggested above is nevertheless sufficiently sound.

§24. Statement of the Law of Increasing Returns or Decreasing Costs.—The Law of Increasing Returns is the exact counterpart of the Law of Diminishing Returns. Marshall states it thus: 'An increase of capital and labour leads generally to an improved organization, which increases the efficiency of the work of capital and labour.'¹

The Law of Increasing Returns may also be described as the Law of Decreasing Costs. Under certain conditions of variations in the technical conditions of production (i.e. production on a large scale) the cost of production of successive increments of supply tends to fall with every increase of labour and capital applied to a business. Thus the cost diminishes up to a point as the size of the manufacturing establishment expands, and as more and more economies of large-scale production are realized. Thus if a motor-manufacturing concern is turning out, say, 100 cars a day at a cost of Rs. 3,000 per car, by doubling its output to 200 cars a day it would perhaps be able to reduce the cost to, say, Rs. 2,500; for the various costs, especially the on-costs or supplementary costs, would not increase proportionately, and greater specialization and a better division of labour could be introduced. The internal economies of the business will go on increasing until at last a point of maximum return or minimum cost is reached, say, when the output has been raised to 300 cars and the cost reduced to Rs. 2,000 per car. Then the disadvantages of large-scale production would begin to tell, and would make it worth while starting another motor factory rather than expanding the existing one. The same holds good of transport and commercial activities, banking and insurance, and so on. If,

¹ The student should carefully note that the working of the Law of Increasing Returns is independent of any inventions or changes in the methods of production. In explaining it, we assume that the arts of production remain the same. The changes we contemplate are only as regards organization, scale of operation, etc.

however, the price of the raw material, like wheat used in the wheat-milling industry or wool used in manufacturing woollen cloth, is the principal factor in determining the price of the finished commodity, there is not much scope for increasing return. An increase in demand for it is likely to be followed by an increase in the cost and therefore an increase in price. Sometimes, however, the opposing tendencies of increasing and diminishing returns may just balance each other and give rise to constant returns.

§25. Consolidation and integration of industry.—We now pass on to consider yet another feature of modern industrial organization, namely the consolidation and integration of industry. Combinations of all kinds are the order of the day, and may be looked upon as a new development of the principle of large-scale production. We may refer to this tendency as the tendency towards large-scale management. These combinations are formed with a view to securing by joint action more favourable results and further economies than before the combination. They are also often actuated by the motive of eliminating competition and controlling supply and price. The modern improvements in transport and communications—through the telegraph, the telephone, the wireless and the postal service—have facilitated their growth. The great cost at which fixed capital has been provided and the ruinous consequences of cut-throat competition have made business rivals more and more anxious to come to terms with each other. This is rendered all the more easy because competition is often so severe that only the few most powerful firms survive it. And the very smallness of the number of survivors makes it easy for them to combine.

§26. Horizontal and vertical combinations.—There are two main kinds of industrial combinations: (i) horizontal combinations resulting in consolidation of industry, and (ii) vertical combinations giving rise to integration of industry.

(i) *A horizontal combination* is a combination of business units engaged in producing or selling similar things—a merger or consolidation of similar establishments into a larger one under a single centralized management. Thus the Standard Oil Company of New York is a combination which owns or controls the great majority of petroleum refineries in the U.S.A. Similarly the Imperial Tobacco Company owns practically all the tobacco-manufacturing establishments in the U.S.A. The recent (1936) merger of the cement companies in India, which have been absorbed by the Associated

Cement Companies of India Ltd is a striking example—and the first of its kind in India—of a horizontal combination.

(ii) *A vertical combination* occurs when a number of dissimilar business units, engaged at *different* stages in the production of an article, come under a single management or the control of a single firm. The idea is to integrate the successive stages in production from the raw material to the finished product. Thus the United Steel Corporation has its own deposits of iron ores, its own coal-pits, blast furnaces, steel works, engineering workshops, railways, etc. The steel and iron industry particularly lends itself to this kind of integration. The Tata Steel and Iron Company at Jamshedpur is an example of a vertical combination of industry.¹

Sometimes horizontal and vertical combinations of industry go together. Thus the Steel Corporation (U.S.A.) is also a horizontal combination for certain purposes or in some branches. It owns many iron furnaces, steel mills, tube works, steel and tin-plate works, and so on. Similarly, the American Tobacco Company has attempted not only to combine all the establishments for manufacturing tobacco, but has also extended its operations to the retail disposal of its products.²

§27. Trusts and cartels.—Of the different varieties of industrial combinations the best known are the Trusts in the U.S.A. and the Cartels in Germany.

Firms organizing themselves as trusts and cartels (especially the former) sacrifice, to a considerable extent, their individual liberty of action in the common interest of all the members. Often, however, the combinations are short-lived and of a looser type, the individual firms trying to secure the advantages of certain definite understandings for preventing the evils of excessive competition, while at the same time retaining intact their individuality and their freedom from outside interference in internal management. Such agreements may take the following forms.³

(i) *Agreements to fix prices.*—These often prove short-lived and unstable because of defection on the part of some of the members, who violate the agreement as soon as they find it convenient to do so.

(ii) *Division of the selling field.*—For example, in the

¹ For an analysis of the special forces at work in the iron and steel trades which strengthen the tendency towards the integration of successive processes, see Robertson, *op. cit.*, pp. 33-5.

² Taussig, *op. cit.*, Vol. I, p. 62

³ For a detailed discussion of the various forms of industrial combinations (or monopoly organizations), see Robinson, *Monopoly*, ch. v.

case of competing American railways. This type also has difficulties of its own, such as borderland disputes.

(iii) *Pools*.—In this case a certain maximum output or quota is fixed for each member, and profits are pooled together and divided in certain agreed proportions. Such arrangements are becoming common in India among competing buses plying for hire on the roads.

We shall now discuss the stronger and more developed forms of industrial combinations, namely, cartels and trusts.

(i) *The cartel (kartell)* is a characteristically German form of combination of the horizontal type. It combines the features both of agreements to fix prices and of pools. It fixes prices as well as output, and functions as a selling agency. Thus the coal-mining industry in Germany is controlled by a cartel with a central sales organization. The profits are distributed among the members on an agreed basis. Sometimes the marketing area is apportioned among the members, who are thus prevented from competing with each other. The central sales agency receives orders, fixes prices and effects sales. The Indian Sugar Syndicate and the Cement Marketing Company of India serve as examples of cartels. In this form of organization members enjoy a far greater degree of autonomy than in a trust. The cartel is comparable to a loose confederation of independent States, while the trust is like a compact federation forming one single State.

(ii) *The trust* in its original form meant an amalgamation of individual firms who transferred their shares to a central board of trustees in exchange for trust certificates. Effective control over the amalgamated concern was thus vested in the hands of the trustees, who directed the policy of the whole organization. The trust in this form was declared illegal in the United States of America, and as a consequence the Sugar Trust and Standard Oil Trusts were dissolved. But the term trust survived and is now applied to all types of combinations in the United States, such as the holding corporation, which holds the major portion of the shares in other companies and the full-fledged unified corporation (or merger) which buys and cancels shares of the old companies (which thereby cease to exist) and issues its own shares directly. Thus combinations even more powerful than the original trusts have come to be established.

§28. The advantages and drawbacks of industrial combination.—The main advantage of an industrial combination is that when a number of business units are consolidated or

integrated together, it is easier to realize the usual economies of large-scale production.¹ Thus supplies are bought in common and sales are on a large scale; cross freights are saved, delivery being given from the nearest factory; large orders are executed promptly and regularly; standardized machinery and repairs can be arranged; there is concentration of production in the best-equipped factories; expenses of advertising are lower; better credit is available; expert and competent management can be introduced economically; and lastly 'the wider view which comes from an interchange of ideas and a comparison of experimental methods in the separate plants is frequently of value'.²

Combinations are, however, generally dreaded because : (i) They often resort to unfair or cut-throat devices of competition against small, independent producers. (ii) They also often result in the establishment of monopolies which may be detrimental to the consumers.³ (iii) They lead to speculation in stocks and over-capitalization (to induce independent units to amalgamate), adversely affecting the position of the corporate investor. This is facilitated by the wheels within wheels that have arisen inside the corporate form of industry. (iv) They result in unemployment and displacement of labour caused by the closing down of some of the concerns and the policy of restricting output. (v) They open the way to political corruption in a democratic State in consequence of the powerful financial resources of the trusts and their interest in controlling legislation and the general economic policy of the State.

§29. Regulation of Trusts.—In order to deal with the trust problem, what is needed and feasible is their regulation by suitable legislation, re-enforced by public opinion. Total suppression, even were it possible, would be undesirable since it deprives the community of the real benefit derived from industrial combinations. The present attitude of the U.S. Government towards them is more favourable than it used to be. For a short period the anti-trust laws⁴ were suspended as part of the National Industrial Recovery programme of President Roosevelt's administration. Indeed, what is called 'rationalization of industry' is characterized by a strong movement in favour of industrial amalgamations with a view to weeding out the inefficient units and reducing the costs of production.

¹ See §20.

² Seligman, *op. cit.*, p. 346.

³ See ch. ix.

⁴ For particulars regarding these laws and their temporary suspension, see Robinson, *Monopoly*, ch. ix.

§30. Rationalization of industry.—The term 'rationalization' is German in its origin and passed into business terminology during the post-war period. It means the rational organization of industry in the light of figures and careful calculations as opposed to a merely empirical, traditional or haphazard process. The World Economic Conference of 1927 defined it as 'the methods of technique and of organization designed to secure the minimum of waste of effort or material'.¹ The parlous condition of German industry during the post-war period and the confusion caused by the inflation of currency created a powerful movement in that country for reducing the costs of production and increasing efficiency by overhauling whole industries with a view to eliminating all waste, modernizing industrial technique and promoting industrial research. A similar movement appeared in the U.S.A. as well. Even before the war of 1914-18 there was a movement in industrial countries of the west in favour of scientific management and the elimination of waste. But the war gave a powerful fillip to rationalization in one form or another by promoting standardized production, by fostering the habit of co-operation among industrial leaders, by stimulating the collection of industrial statistics, and by restricting, through Government fiat, certain unnecessary types of production. Rationalization has made great strides in Germany and the U.S.A., and the movement has now spread to other countries, including India.

Rationalization includes : (i) the scientific organization of labour, (ii) the standardization of both materials and products, (iii) the simplification of processes, (iv) improvements in transport and marketing, (v) amalgamations, horizontal and vertical,² and (vi) the modernization of industry.

The rationalized industry is thus expected to govern itself consciously, reaching back to the source of raw materials and forward to the consumer.

Rationalization has already been carried on with considerable success in such enterprises as the Bata shoe factory, the Imperial Chemical Industries in Great Britain, and the Ford factories in the U.S.A. It has resulted in lower costs, increased efficiency, higher wages, better goods at lower prices, and sustained rewards to the management : that is, in con-

¹ *Social Aspects of Rationalization* (International Labour Office), p. 6.

² 'By rationalization is meant action taken by the State or by the majority of producers in a particular industry to bring that industry under a single control.' Meade, *op. cit.*, p. 174.

siderable advantages to all concerned. It bids fair to be a permanent feature of modern industrial organization.¹

Rationalization has, however, its own difficulties and disadvantages. (i) It calls for a high degree of trained intellectual and business ability to control industry, which may not be forthcoming readily. (ii) Again, a large amount of capital is necessary if old plant is to be scrapped and production modernized. (iii) Moreover, the elimination of the less efficient units and the introduction of improved plant and processes result in considerable displacement of labour and unemployment (although ultimately labour may gain). (iv) Lastly, the consolidation and integration of industry may give rise to monopolistic combinations detrimental to consumers.

Considerable opposition from the labourers was encountered by the Bombay cotton mill owners when they recently tried to introduce rationalization (allotting more looms to weavers, etc.). But as the 1934 Report of the Bombay Labour Office inquiry about wages and unemployment in the cotton mill industry and the Report of the Bombay Textile Labour Enquiry Committee (1940) show, considerable progress has nevertheless been made.²

§31. Competition.—Modern economic organization is said to be competitive, in contrast to medieval economic organization which was supposed to be under the sway of custom. It is also argued that competition is the main regulator of the whole economic mechanism of modern society in production, distribution, exchange and consumption of wealth.

Competition means complete freedom of action in economic life, industry and enterprise, so as to call forth the highest exertion of energy and resourcefulness. Under competition, everybody is quite free to choose what occupation he likes and to sell his goods and services wherever he likes. Competition implies private property and unhampered liberty for the possessor in the matter of its employment and disposal. Commonly, the word competition brings before our mind's eye the picture of rival producers of a commodity, each trying to attract towards himself the largest number of customers. This, however, implies that each seller is free to regulate his sales policy as he thinks fit. For example, it is open to every seller to quote as low a price as he chooses without his free-

¹ cf. *Twentieth Century Business Methods*, Vol. I, ch. xviii. See also Robinson, *The Structure of Competitive Industry*, pp. 169-72.

² For further particulars, see *Report of the Bombay Textile Labour Enquiry Committee*, ch. viii.

dom being restricted in any way by other sellers or by any outside agency like the Government. Similarly, every purchaser enjoys unrestricted freedom in his choice of goods to be bought as well as of the sellers from whom to buy them.

§32. Implications of perfect competition.—A great deal is written about the advantages of an economic system based on competition. The theoretical arguments in favour of such a system are strong (see §34), but most of them rest upon a tacit assumption that there is 'perfect competition' in the economy. We must therefore explain what is meant by perfect competition. 'We say that competition is perfect when two conditions are fulfilled: (i) when there is no artificial restriction upon the movement of factors of production from occupation to occupation in search of the highest reward, and (ii) when no single unit of control—i.e. no single individual or company which is deciding to buy or to sell something—can by its own action appreciably affect the price of the thing bought or sold.'¹ The first condition implies that there are no artificial restrictions on the mobility of the factors such as those imposed by a Trade Union on the number of new persons who can enter a particular occupation, or again such as those imposed by a system of State licensing seeking to limit the number of producers who are allowed to produce a commodity. The second condition 'implies that there is a large number of buyers and a large number of sellers, buying and selling identically the same article or service and each knowing the price at which others are buying and selling. . . The first consequence of these conditions is that' the whole supply of a commodity like wheat 'will be sold at the same price at any given time. . . The second . . . is that no producer or consumer could affect the price of the commodity by his own individual action.'² In perfect competition individual firms would tend to be of the optimum size, in the sense already explained,³ and the price offered for the commodity would be equal to the cost of production of a firm of the most efficient size. Any firm which produced more or less than the optimum output (which means the output which can be produced at minimum average cost) would make a loss, since its average cost would be raised above the market price of the commodity.

§33. Imperfect (or monopolistic) competition.—The traditional assumption of perfect competition, while it is exceed-

¹ Meade, *op. cit.*, p. 96.

² *Ibid.*; and for a fuller analysis, pp. 98-100.

³ See §21 *ante*

ingly convenient for simplifying the analysis of price (see ch. ix), is not fulfilled in the real world, especially so far as it depends upon the existence of a perfect market, which is extremely rare.¹

We may now briefly analyse the causes of what has been called imperfect competition, which covers the very large number of intermediate cases between the two extremes of perfect competition and pure monopoly (see ch. ix). In these intermediate cases 'there is neither a single individual who controls the bulk of the amount demanded or supplied, nor are there so many that their individual shares are negligible in relation to the total. We find a number of people (buyers or sellers) who are each able to influence, in some measure, the terms of exchange.'²

Considering first the supply side, for various reasons there may be few producers or sellers of a commodity. For instance, the State may restrict by law the number of persons or firms allowed to produce—as in the case of public utility concerns like railways or electric supply (see ch. ix); or again, raw materials like petrol or iron ore may be owned legally by few owners. Finally, the technical economies of large-scale production which require a large plant and capital outlay (as in the case of motor-cars or railways) may limit production to a few producers. In all these cases each individual producer may be able to affect the price of his product.

Other reasons for imperfect competition leading to a similar result arise from the existence of imperfect marketing where the consumers do not invariably purchase a commodity from the sellers who are offering it at the lowest price. 'Quite apart from the inertia or ignorance which prevents him (the customer) from moving instantly from one seller to another, as soon as a difference appears between the prices they charge, he has a number of good reasons for preferring one seller to another. And these reasons will affect different individuals differently.'³ In the first place, owing to transport costs, each producer or seller will possess a semi-independent market, composed of the consumers nearest to his factory or shop. Secondly, there may be real or imaginary differences in the quality or type of product which each individual producer is selling. This particularly applies to articles which bear a particular brand or which are sold under well-known names, such as cigarettes, drugs, tinned foods, clothes and innumer-

¹ Joan Robinson, *Economics of Imperfect Competition*, pp. 88-9.

² Roll, *op. cit.*, p. 84.

³ Robinson, *op. cit.*, p. 89.

able other articles. Besides, the customer will be influenced by advertisement, which plays upon his mind with studied skill. Lastly, 'customers will be influenced in varying degrees by the difference between the facilities provided by different producers—quickness of service, good manners of salesmen, length of credit, and the attention paid to their individual wants. In some cases the customer will be influenced by the actual price, since he will sometimes take a high price to be a sign that the article in question is a good one, and reject a cheaper substitute because its very cheapness makes him suspect that it is inferior.'¹

Thus, besides difference in price, the customer's decision to buy from one producer rather than another is influenced by various other reasons which are fully exploited by rival producers. The very intensity of competition, in the plain sense of the word, results in breaking up the market, and is responsible for the existence of imperfect competition.

Imperfect competition may also arise on the demand side, when there are only a few buyers for a commodity, each of the purchasers affecting its price appreciably by his action in buying more or less of it. This situation more commonly exists in the case of factors of production (e.g. hiring labour of a particular grade or purchasing a raw material like rubber of a particular quality in the motor industry) than in the case of finished consumption goods.

In the next chapter we shall consider the manner in which value is determined under conditions of (i) perfect competition, (ii) perfect monopoly, and (iii) imperfect competition, which has also been called monopolistic competition. We may add here, however, that the price phenomena to be explained in real life very largely belong to the realm of imperfect competition and cannot be adequately covered either by the theory of perfect competition or perfect monopoly.²

§34. Is the present system of competition satisfactory?—The classical economists tended to exaggerate the blessings of competition, the theoretical implications of which were not fully realized by them. As we have shown above, pure or perfect competition rarely, if ever, exists and the theoretical advantages claimed for it are considerably curtailed in real life owing to the existence of imperfect competition. For instance, the classical economists argued that only under a regime of competition can our needs be effectively satisfied,

¹ Robinson, *op. cit.*, pp. 89-90. Also Meade, *op. cit.*, pp. 130-3.

² E. Chamberlain, *Theory of Monopolistic Competition*, p. 3.

because under competition effort is directed automatically to the production of those goods which are really needed by society. Competition automatically brings about an equilibrium between production and consumption, they said. If there is deficiency of production, prices rise and with them profits. More producers come on the scene and the increase in production again sends down the prices. If there is a surplus, lower prices will result in restricted production and thus bring about a rise in price. An adjustment between supply and demand is thus easily affected by the force of competition. All this, however, is only partially true. The phenomenon of periodical crises, well known to the modern world, shows that maladjustment between production and consumption constantly occurs under the present system of competition. The general feeling, at present, is that this haphazard action of competition as it operates in life must be replaced by deliberate planning of production and its continuous adjustment to consumption.

Competition 'would not [necessarily] bring about the production of those commodities which are most beneficial to consumers, because consumers fail to distribute their expenditure wisely among different commodities'.¹ They often have irrational preferences and may neither buy in the cheapest market nor buy something which is of benefit. It has also been claimed that under competition the factors of production will always be employed in the most efficient combinations in different industries. This again is not a certain result as there is no free mobility of the factors of production. Further, it is generally argued that competition stimulates economic progress by the rivalry among the competing parties and by the elimination of the inefficient and the unfit. This is, of course, mainly true. Nevertheless we must not forget that the methods of competition may, sometimes, be very harmful and may lead to such evils as adulteration and the production of cheap, shoddy articles, unduly low wages to the workers, etc. Nor is it always true that competition means the lowest possible prices. For often there is a considerable waste involved in what is called imperfect competition, for example, in very expensive though quite unnecessary advertisement. This means unduly high costs and therefore high prices—not to speak of the consumer's own preference for a high price in certain cases.

¹ Meade, *op. cit.*, p. 120.

Competition, in the sense of unrestricted freedom for everyone to regulate his economic relations, frequently leads to gross injustice. The most striking example of this is the one-sided character of nominally free bargains between unequally matched parties, in which the stronger party exploits the weaker. The individual worker, almost inevitably, suffers in striking bargains for wages with the relatively more powerful employer. Competition cannot therefore be depended upon to distribute income in the most desirable way. In order that it should be capable of yielding good results the parties to it must be evenly balanced. Hence the development of Trade Unions and the substitution of collective for individual bargaining.

Thus we nowadays admit the necessity of limiting the operation of competition, which is largely imperfect, in various directions by co-operation, monopoly owned or regulated by the State, rationalization and planning, etc. But the question whether it is possible or desirable to eliminate competition altogether, and radically to alter the present economic structure of society (e.g. on the lines followed in Soviet Russia) is highly controversial.

SUMMARY

Except in the case of the autonomous worker, the task of organization is undertaken by a specialized class of people in modern industry, who are generally known as *entrepreneurs*. The function of the entrepreneur is to plan the enterprise, bring together land, labour and capital in the most suitable proportions, and above all to take the risks of the business. It is a most important and delicate function.

Business enterprises may take several forms, e.g. (i) individual as opposed to corporate enterprises; (ii) partnerships; (iii) corporations or joint-stock enterprises; (iv) trusts; (v) government or State undertakings; (vi) co-operative production; and (vii) profit-sharing

Of these the typical and dominant form of business enterprise is the joint-stock company, which has the great advantage that it makes possible modern large-scale enterprises requiring huge capital outlay. It is not without serious drawbacks. Profit-sharing and co-operation represent attempts to avoid these drawbacks. But under present conditions they cannot be regarded as substitutes for the joint-stock company.

One of the most important features of modern industrial organization is the great development of *division of labour*, by which each kind of production tends to be split up into more and more separate processes. Instead of all the processes being looked after by the same set of people, each is assigned to a separate set. The final product of course is complete only after the results of these separate processes have been put together (i.e. the division of labour implies or requires combination or co-operation of labour).

The advantages of division of labour are many and obvious. (i) It increases the effectiveness of labour and tends to enhance wages. (ii) It reduces the cost of production and thus benefits the consumer through lower prices. (iii) It promotes invention.

Its main disadvantages are: (i) It makes labour monotonous. (ii) It exposes the worker to industrial disease. (iii) It destroys the personal friendly relations between workman and employer.

Division of labour, machinery, factory production are all so intimately related to one another that it is difficult to separate the effects attributable to each. Consequently causes and consequences are apt to get mixed up. In this manner, some of the evils of machinery and of factory production in general come to be illogically described as evils of division of labour.

Division of labour is limited by the extent of the market, the development of wants, and the nature of the employment.

Machinery represents the mastery of man over nature and is a mark of progress and civilization. It enormously increases the productivity of human labour; takes over work that is purely mechanical and monotonous, leaving intelligent work to human beings; lessens human drudgery; relieves the strain on human muscles; increases the mobility of human labour by increasing the demand for general intelligence rather than for specialized skill; widens the scope for employment; ensures accuracy, regularity, promptness and delicacy of work; and promotes standardization of goods. Its sudden introduction may displace labour. In the end, however, by increasing wealth and capital it increases the demand for labour.

Division of labour refers to specialization on the part of individuals. *Localization of industries* refers to specialization on the part of localities. It may be described as the territorial division of labour. It may be determined by natural or permanent causes, or may be purely accidental. The natural causes may relate to transport costs and costs of factors of production in a given centre or locality. When an industry is concentrated in a locality, it comes to enjoy certain advantages known as external economies due to the springing up of subsidiary industries, the congregation of skilled workers, and the possibility of rivals observing each other and learning from each other.

The main disadvantage of localization is that the locality may suffer if its only industry declines for any reason. The remedy lies in the establishment of supplementary industries.

Forces making for *decentralization*, as opposed to localization of industry, are high costs due to heavy taxation, etc. in big industrial cities, development of transport, and the use of cheap electrical instead of steam power.

External economies are those which are dependent on external conditions—on the general development of an industry (e.g. those which flow from the concentration of a number of similar firms in the same locality).

Internal economies are so called because they are internal to every firm and depend on its resources, the efficiency of its management, etc. A number of these internal economies are due to the adoption of a sufficiently large scale of production—the ideal or optimum scale of course varying from industry to industry. Large-scale production is generally indicated where the fixed charges are heavy and demand for the products is extensive and regular.

When the *scale of production is large*, several advantages attend upon it, e.g. a more elaborate division of labour, the possibility of employing highly-paid experts; up-to-date machinery and effective advertising methods; expensive research and experiments; utilization of by-products; saving in overhead expenses, and in buying and selling; better credit, larger turnover of capital; comparative freedom from market fluctuations.

All these advantages increase the competitive power of a firm. They also benefit the consumer because efficient production from his point of view means lower prices (and, if possible, also better quality).

The scale of production, however, cannot be enlarged indefinitely. After a point the enterprise exceeds its optimum size, becomes too cumbersome, difficult to manage and to supervise and therefore inefficient and wasteful. The total costs after this point will increase faster than total receipts. The supply of business men of extraordinary ability who can manage huge concerns efficiently is limited. The possibility of labour troubles is greater on account of the increase in the number of labourers to be dealt with. Through excessive growth in size, a firm may lose its adaptability to changing conditions. Lastly, large-scale organization is apt to facilitate the formation of monopolistic combinations.

Co-operation may enable small concerns to realize all the advantages of large-scale production, while avoiding its disadvantages.

The advantages and disadvantages of large-scale and small-scale production apply *mutatis mutandis* to agriculture also. The limit of extension of scale is, however, reached earlier in agriculture than in industry, not to speak of certain special social and political advantages attaching to a widely diffused ownership of land which in practice favours small-scale production.

The *Law of Increasing Returns* may also be called the Law of Diminishing Cost, because with every increase of capital and labour the cost of production per unit decreases up to a point. This tendency is more noticeable and lasts longer in industry than in agriculture and other extractive industries. But here also a limit is reached sooner or later, when instead of returns increasing they begin to diminish. In other words the costs begin to increase faster than the economies of large-scale production.

The modern tendency towards consolidation and integration of industry is mainly due to the desire to eliminate cut-throat competition, but it also makes possible certain economies reaped from an enlargement of the scale of production.

Industrial combinations may be (i) horizontal, i.e. a combination of similar establishments, or (ii) vertical, i.e. a combination of dissimilar business units. In combinations known as *trusts* the individual firms entering into the combination surrender their private liberty of action or management. In combinations known as *cartels* the units continue to enjoy a considerable degree of autonomy. There may be other kinds of combination with any number of variations as regards power surrendered and matters forming the subject of agreement.

Combinations, as suggested above, may result in the reduction of costs owing to multiplication of the economies of large-scale production, but they are feared by the public because of their tendency to develop into oppressive monopolies. They may also use their great power and resources to get control

of the political machinery for their own selfish purposes. A total suppression of trusts and combinations is neither possible nor desirable. But legislative regulation of some kind may be necessary.

The movement towards *rationalization* after the war of 1914-18 owes its strength to an impulse similar to that which leads to the formation of combinations. It means the rational organization of an industry in the light of statistics and careful calculation as distinguished from tradition and empiricism. It implies scientific management and the elimination of waste (or overproduction) through the scientific organization of labour, standardization of materials and products, simplification of processes, improvements in transport and marketing, amalgamations, etc. Rationalization, however, requires high business ability and the supply of abundant capital in order to be successful. It may also be accompanied by considerable displacement and unemployment of labour and may degenerate into selfish monopoly.

Competition.—In classical theory the force of competition is a principal regulator of economic relations in modern society. It implies among other things complete freedom in the choice of occupations and in buying and selling.

The assumption of *perfect competition* is largely hypothetical, and it implies absence of restriction upon the movement of factors of production and absence of a single unit of control over price either through demand or supply.

In real life competition is imperfect. Such *imperfect competition*, which covers a very large number of intermediate cases between the extremes of perfect competition and perfect monopoly, is due to several causes, such as the existence of few producers of a commodity and of imperfect markets. The former is the result of restriction imposed by the sale, concentration of ownership in raw materials, or the need for a large plant and outlay. The existence of imperfect markets is the result of consumers' ignorance of transport costs which create for each producer a semi-independent market composed of consumers nearest to his factory or shop, real or imaginary differences in quality or type of product which each individual producer is selling, influence of advertisement and of facilities provided by different producers, and consumers' own preferences in some cases for a high price as a sign of quality. Imperfect competition may also arise when there are few buyers for a commodity.

The classical economists, who did not fully understand implications of perfect competition which they tacitly assumed, tended to regard competition as a wholly beneficent influence calculated to bring about swift and certain adjustment between production and consumption, the survival of the fittest and distribution of rewards according to deserts. Imperfect competition however does not allow these advantages to be fully reaped. It was also realized that complete *laissez-faire*, which seemed to be the logical corollary of freedom of competition, led to various evils. Deliberate planning, regulation and regimentation of various kinds, is now almost universally regarded as necessary to cope with these evils and to guide the force of competition so that it may operate to the best social advantage.

IX

EXCHANGE : VALUE AND EXCHANGE

§1. Scope of the chapter.—In the introductory chapter, we have already examined the meaning and scope of exchange as one of the main divisions of economics and also its relation to production. We shall now first study the importance, benefits and conditions of exchange. We shall then show how at every stage there is the determination of value, and how the concept of exchange leads to that of value.

§2. Importance of exchange and its benefits.—In the early epochs of civilization, members of a self-sufficing tribal group or of a family met their wants by their own direct efforts. Every member was engaged in the same occupation, although there was a certain elementary division of labour between the sexes. But as these groups expanded and the contacts between them multiplied, the need for exchange became obvious. As communities gradually developed into villages, villages into towns and towns into nations, division of labour became more and more complex, and exchanges became wider and more frequent. Under modern conditions, we have an elaborate system of division of labour and we mostly live by the exchange of our services and products for those of others. Production being mostly for exchange (sale), and rarely for the producer's own use, we must look upon wealth from the point of view of exchange. Economic progress implies specialization, and specialization in its turn implies exchange or marketing. The advantages of exchange are mainly those of division of labour. The possibility of exchange enables nations and individuals to specialize in those tasks for which they have the greatest aptitude or natural advantages. This makes for economy of effort and provides conditions favourable to the material prosperity of all. The conception of exchange gives rise to that of value and price, that is the ratio at which exchanges take place.

§3. How and why exchange takes place.—As Jevons puts it, 'exchange is the barter of the comparatively superfluous for the comparatively necessary'. People sometimes argue as if one of the parties to every exchange must necessarily lose. This view is, however, incorrect. A sounder idea is conveyed by the common statement that 'exchange is no robbery', which suggests that both parties gain. The act of buying and selling

being purely voluntary, we are as a rule entitled to say that both buyer and seller derive benefit from it. Each party is satisfied that what he receives in exchange is more valuable to him than what he has to part with. Suppose a farmer exchanges his surplus grain for the surplus cloth of a weaver. It is clear that the farmer values the cloth at least as much as, if not more than, his grain; and that the weaver values the grain at least as much as and possibly more than his cloth. The intervention of money does not make any difference. The farmer sells his surplus grain for money, and with this he purchases cloth and other requirements. Here we say that the utility of cloth to our farmer is not less than that of the money given. The above illustration serves also to emphasize certain *conditions of exchange, which are as follows* :

(i) First, each of the parties must desire the thing owned by the other.

(ii) Secondly, both must be able to compare the satisfaction to be gained by possessing the thing desired with that derived from what must be given up in exchange.

(iii) Finally, both the parties must be able to command a surplus of the commodity over and above what they require for their own needs, and they must have a reasonable assurance of being able to exchange this surplus for something else that they may desire.

§4. Exchange by sale and purchase.—In the course of economic progress, exchange by barter is found to be attended by many inconveniences and is replaced by 'money economy', or exchange by sale for money, and purchase by means of money. For example, if our farmer possesses a cow and wishes to have a blanket, a ploughshare and a box, it is very unlikely that he could get all these three things from one man, and that this man should at the same time be in need of the farmer's cow. He may have one of the three things the farmer wants, but the cow is more valuable than this one thing and is obviously not divisible; the farmer cannot offer only a part of it in exchange. Therefore, no exchange would be possible. This difficulty is expressed by saying that exchange by barter requires *double coincidence of wants* (i.e. *A* must want what *B* possesses, and *B* must want what *A* possesses). When exchanges become frequent and complex such double coincidences will be very rare. On the other hand, if our farmer were first to sell his cow or grain for money, he could use this money to purchase cloth or a ploughshare or any of his other requirements whenever he chose to do so. The intervention of money, therefore, splits the barter into sale and purchase.

but in the long run it has the same results as barter itself, namely, exchange of one set of commodities and services for another.¹

The modern system of exchange thus requires money as the universal medium of exchange and the common measure of value. It is also obvious that it requires merchants to serve as middlemen linking up producers and consumers. It further requires means of transport, such as railways, roads and ships for moving goods from the place where they are produced to those places where they are wanted; and lastly it requires well-developed markets to enable buyers and sellers to come into contact with one another.

The basic problem of exchange is the problem of value, that is, of the formulation of the principles which determine the ratio at which exchange takes place. We shall see how practically every problem in economics can in a sense be regarded as a problem of value.

§5. What is a market?—Before embarking upon the analysis of value, we must be clear as to what exactly we mean by the term 'market' in economics. Here we must first rid ourselves of the notion that the term market necessarily refers to a particular and definite locality. The essential idea of a market is not so much some particular place (because, as we shall see presently, some markets are world-wide) as the presence of effective competition. What is implied is that buyers and sellers are in such intimate contact that the price of the commodity in question tends to be uniform throughout the extent of the market. The contact is intimate in the sense that direct competition is possible. Buyers are bidding against one another and so are sellers. If prices are higher in one part of the market than in others this fact becomes instantly known to the whole body of sellers and purchasers. Sellers will then set about sending supplies so as to benefit by the higher prices. Buyers, on the other hand, will abstain from placing their orders in that part of the market where higher prices prevail and will buy where prices are lower. In other words, supply will increase and demand will decrease in this part of the market, so that the prices which have risen will come down, and eventually one price will come to rule in the market as a whole. The real distinguishing mark of a market, therefore, is this tendency towards the establishment of a uniform price for the same commodity at the same time, the force securing this result being, as already explained, the existence of effective

¹ The difficulties of barter are again referred to in ch. x, §1.

competition. It is not suggested that prices never vary as between one part and another of the same market. But if the market is properly organized or, in other words, if it is a market in the true sense of the term then these variations will tend to be quickly corrected.

§6. **Conditions determining size of a market.**—It is not very difficult to infer from what has been said above that a particular market will be wide or narrow in response to the following main conditions :

(i) *Means of communication which exist between buyers and sellers.*—In these days, the telegraph, the telephone and the wireless enable vast bodies of sellers and buyers to be in instant communication with each other, though they may be separated in space by enormous distances. Sellers and buyers come to know at once the state of prices in different parts of the market and proceed to buy or sell wherever it suits them. Under those conditions, it is easy to see how in respect of cotton, for example, such widely separated places as Bombay, Liverpool and New York constitute one market, and prices at all these centres tend to be the same at any given time.

(ii) *The portability of goods dealt with.*—Even if I know that I can sell my cotton better at Liverpool than at Bombay, this knowledge will be useless to me unless I am in a position to transfer my cotton rapidly and without too much expense to Liverpool. Easy portability is thus an essential condition for the establishment of a wide market.

(iii) *Cognizability* (or the ease with which a thing can be recognized).—So far as this matter is concerned, first-class securities and the precious metals enjoy an exceptional advantage. Although the buyer may not be on the spot he knows exactly what he is buying. There can be no mistake about the nature or the quality of the goods he is buying. It is obvious that in cases where it is necessary for the would-be buyer actually to see or handle the article because of the impossibility of getting an accurate impression by mere description, the market will be very restricted. The expedient of grading and sampling has latterly improved the conditions for such articles as wheat, cotton, pig-iron, etc. A sample may be sent (that is, if the commodity is homogeneous), or the commodity may have been classified into a number of grades so that everyone knows, for example, that Grade A stands for such and such a quality, Grade B stands for such and such another, and so on, and a bargain may be struck without the buyer actually being on the spot to inspect the commodity.

(iv) There must be *a large and steady demand for the*

commodity. Otherwise it will not have a wide and well-organized market.

(v) *The commodity must be reasonably durable*, that is, it must not go bad like butter or fruit in the process of transfer. Owing to the recent advances made in cold storage, many commodities are passing from the perishable into the durable class and their market is consequently widening. We are, for example, already trying to find a market in England for our mangoes because it is now possible to protect them from damage in transit. In proportion as these conditions are fulfilled, commodities will have wide and highly organized markets instead of small and restricted markets.

§7. Nature of speculation.—Speculation, or dealings in futures, constitutes an essential and useful feature of modern markets. Such dealings take place on the (i) Produce Exchanges (i.e. markets for commodities like wheat, sugar, coffee, copper, oils); (ii) Stock Exchanges (i.e. markets for invested capital, namely stocks and shares); and (iii) Bullion Exchanges (markets for the precious metals, that is, gold and silver).

‘By speculation is meant the purchase or sale of anything in the hope of profit from an anticipated change in its price.’¹ Its essence lies in the forecasting of price movements, and then buying or selling, as the case may be, for profit. The speculator concentrates and intensifies the forces which affect demand and supply during a given period.

A highly gradable commodity like wheat or cotton, regularly in demand and produced on a large scale, is very suitable for speculative transactions, particularly if its supplies are intermittent or seasonal in character.

§8. Principal forms of speculation.—(i) A speculator, anticipating a fall in price, may sell ‘short’, i.e. he may enter into a contract for the delivery at a certain specified time, in the future, of goods not yet in his possession. Suppose that, in the speculator’s opinion, the price of cotton is likely to fall in three months’ time owing to the expectation of a bumper crop (in India, the U.S.A., etc.). The price of cotton (say in January) is Rs. 250 per candy, but is expected to fall to Rs. 200 in March. Our speculator will sell cotton for delivery three months hence (March) at a price, say Rs. 240, fixed now. If his forecast is correct and the price *does* fall, he can enter the market and buy cotton ‘spot’ at Rs. 200 (or even Rs. 220 or Rs. 230) in order to fulfil the contract by which he agreed to sell at Rs. 240, and thus make a handsome profit. Actual deliveries are rarely taken or given. Usually only the differ-

¹ Seligman, *op. cit.*, p. 360.

ence between the present and future price is settled. If several speculators thus sold 'short', their action would at once begin to depress prices, and a *sudden slump* in future prices would be avoided. This gradual fall would also stimulate consumption, and thus at any rate partially absorb the increased production of cotton. Speculators who speculate for a fall in price are technically called the 'bears'. The 'bears' are interested in pulling down prices.

(ii) A speculator on the other hand may buy 'long', i.e. will buy more for future delivery to himself than what he cares to take or requires immediately. He will do this if he has reasons to anticipate a rise in price. Suppose a failure of the cotton crop is apprehended (or that there is expectation of increased demand for it) and prices are expected to rise to, say, Rs. 300 a candy. Our speculator will, therefore, enter into a future contract requiring the other party to deliver cotton to him at a price fixed now, say Rs. 250 or even Rs. 260. If the price does rise to Rs. 300, or is at any rate above Rs. 250 or 260 (i.e. the price contracted for), he will at once sell the goods at the higher price and realize a handsome profit. If several speculators bought 'long' in this way, their action would begin at once to send up prices and would thus prevent a *sudden spurt* in prices in future. It would also check consumption and thus promote a better adjustment of demand to supply. Such speculators are called 'bulls'. The 'bulls' speculate for a rise and try to toss up prices.

§9. Advantages of speculation.—Professional and regular speculation by intelligent people possessing expert knowledge has a very useful role to play in modern economic organization. From the above examples, it will be clear that the principal advantage of speculation lies in the moderation of fluctuations in market prices. It exercises a steadying influence on their course and prevents undue congestion of either demand or supply at any one point. It may be said to link up the market price with the normal price. It prevents wild oscillations in prices by facilitating adjustment between demand and supply and thus benefits producer and consumer alike. 'Speculation is a struggle of intelligence against chance' and by its help forces which, left to themselves, would make themselves felt in too violent and jerky a manner, begin to operate at once and affect market prices gradually.

Another advantage of speculation is in the assumption by speculators of risks inseparable from production initiated long in advance of demand. Violent fluctuations in the prices of raw materials might upset all the calculations of manufacturers

and convert profit into loss through no fault of theirs. Here the professional speculator plays a very useful role by freely assuming risks and by entering into future contracts with the manufacturer for future delivery of raw materials (like cotton, or wheat) at a fixed price. This relieves the manufacturer of anxiety regarding a possible rise in the price of his raw materials which may involve him in loss. For, as often happens, he may have entered into a contract with some wholesale merchant to sell him the finished goods at a certain price and he must do so irrespective of any increase in his cost of production. The manufacturer being protected from this danger by the intervention of the speculator is enabled to concentrate his attention on his legitimate function as an organizer of industry. The same results can be obtained by the manufacturer or business man himself resorting to speculation and entering into what are called 'hedging' contracts. For example, when a miller is buying wheat for his business, he may also sell it for future delivery at the time when he expects to be ready with the finished commodity, so that in case the price of wheat falls, the loss caused by a consequential fall in the price of wheat-flour is made good by his gain in selling wheat at a price higher than the new low price ruling in the market.

Speculation on the stock exchanges in securities of various kinds is useful in so far as it promotes investment of capital in the most promising lines of business. Investment as a whole is also promoted by the facilities for a ready sale of stock of all kinds. If a man has purchased some shares, it is not as if his money were locked up for ever. If he happens to be in need of cash, he can sell his shares on the stock exchange.

§10. Evils of speculation.—Speculation in the hands of ignorant, reckless and unintelligent persons, or in the hands of clever but unscrupulous speculators is, however, highly dangerous and most harmful to society. The craving for getting rich quickly often leads people to gamble in securities and commodities as they gamble at cards or in lotteries, and their action results in violent fluctuations in prices. Suppose, for example, that speculators who enter into transactions merely in a spirit of gambling and without giving any real study to the conditions of supply and demand, assume that prices are going to rise. Under this mistaken belief, they rush into the market and make extensive purchases with a view to profiting if the prices rise. But the real economic forces of which they have not been careful to take account may be forcing the prices down. The purchases of the speculators, however, will first send up the prices, so that the inevitable fall, when it

comes, will be unnecessarily steep and violent. Unscrupulous speculators sometimes try artificially to manipulate prices in their own selfish interests, utterly unmindful of social good. This kind of speculation is obviously anti-social.¹

§11. Remedies.—While the evils of speculation are thus very serious, it is by no means an easy task to suggest remedies short of the total prohibition of *all* dealings in futures. And this is certainly not desirable, even were it possible. The so-called anti-option laws prohibiting future transactions in grain in Germany have been either ineffectual or have done harm by interfering with *legitimate* speculation. Apart from close scrutiny by responsible stock exchange committees, what is wanted is a strong public opinion, which will not tolerate ignorant reckless gambling, because such gambling is often not only ruinous to those who actively participate in it, but also causes the most serious inconvenience and hardship to the public in general. We must also endeavour to foster a higher standard of business ethics and a more developed sense of social responsibility.

§12. Approach to the problem of value.—Value always depends upon the interaction of supply and demand. In this connexion, we often meet with false or inaccurate statements; for instance, the statement that value depends on cost of production only. This is at once disproved by pointing out that much money may be spent in making an article and yet people will not pay anything for it if they have no use for it. Again, let us suppose that the cost of production of an article *A* is twice as great as that of another article *B*. It may also happen that the price of *A* is for some time twice that of *B*. Nevertheless, there is no guarantee that this proportionate relation of prices will always be maintained. It is a matter of common experience that relative prices of commodities are constantly changing without any corresponding change in their cost of production. This happens because conditions of demand keep changing. For instance, if an illiterate community becomes literate, its demand for books will rise, and the prices of books may therefore be higher.²

Similarly, the phenomenon of value cannot arise unless there is the supply side as well as the demand side. The plain

¹ All these abuses of speculation were amply illustrated by the Wall Street crash in New York in October 1929, which ushered in the world economic depression.

² In practice the tendency for prices to rise is more than counterbalanced in the case of books, as a greater demand enables the costs of production to be distributed over a large edition, and the price is often reduced. See §§18 and 28.

commonsense meaning of this statement is that unless it costs something to make a commodity it will not bear a price, however much it may be desired by people. (The exceptional class of useful goods which do not involve any cost of production but which nevertheless bear a price because of their scarcity is so small that it may be ignored.)

§13. **Marshall's statement of the theory of value.**—We have already made a first approximation to a correct theory of value by explaining how value (or 'price' which simply means value in terms of money) depends both upon supply and demand. Marshall compares the phenomenon of value with the phenomenon of cutting by means of a pair of scissors. The process of cutting requires the lower blade as well as the upper; both of them may not always be equally active but both must operate. Similarly, the phenomenon of value cannot manifest itself unless the supply side as well as the demand side is present; although supply may exercise a larger determining influence under one set of circumstances, while demand may be the more important factor under another set of circumstances.¹

§14. **The marginal theory of value.**—Modern economic analysis has drawn pointed attention to the behaviour of both supply and demand *at the margin*. Instead of simply saying that value depends on supply and demand, it is more accurate to say that it depends on *marginal supply and marginal demand*. As we know, the supply of any commodity in a market is contributed not by one producer but by several, and the cost of production varies from producer to producer. But the price demanded in the market does not vary from producer to producer. We have seen that in the same market there cannot be more than one price for the same commodity. This uniform price must be such as to satisfy all producers. If, however, it satisfies the man whose cost of production is the highest or the man who is least anxious to sell, that is the *marginal producer*, it must necessarily satisfy the other producers. From the side of supply then, the price is fixed by the *marginal supply* (that is, the supply of the marginal producer).

¹ 'We might as reasonably dispute whether it is the upper or under blade of a pair of scissors that cuts a piece of paper, as whether value is governed by utility or cost of production. It is true that when one blade is held still and the cutting is effected by moving the other, we may say with careless brevity that the cutting is done by the second, but the statement is not strictly accurate, and is to be excused only so long as it claims to be merely a popular and not strictly scientific account of what happens.'—Marshall, *Principles of Economics*, p. 348.

Similarly, among the consumers of a commodity there are some who are more anxious to purchase and are willing to pay or can afford to pay more than others. But, unless the more anxious as well as the less anxious consumers purchase the commodity, the whole of a given aggregate quantity will not be sold. In order that it should be sold, the uniform price must be such as to suit the least anxious among the purchasers, i.e. the *marginal consumers*. From the side of demand, therefore, the price is fixed by marginal demand. Thus the actual price must be such that it represents both the marginal supply and the marginal demand.

Let us suppose that 300 units of a certain commodity x are required, and that the amount can be made up only if, say, three suppliers A , B , C , can be induced to bring in their supplies. Suppose for simplicity's sake that each of them supplies 100 units. The cost of production per unit of the commodity is as follows :

| | | | |
|---------|-----|-----|-------|
| For A | ... | ... | Rs. 5 |
| For B | ... | ... | Rs. 6 |
| For C | ... | ... | Rs. 7 |

C is here the marginal supplier who is 'least willing to sell', in the sense that he will ask for a higher price (namely, Rs. 7) than A or B . Under these circumstances the one uniform price which will satisfy all suppliers will be not less than Rs. 7. Therefore, we say that from the side of supply the price is fixed with reference to marginal supply.

As regards the consumers, let us suppose the aggregate of 300 units can be disposed of only if D , E , F , all offer to buy it. Since their circumstances are not the same, the price at which each will consider it worth his while purchasing the commodity will be different.

D is prepared to pay Rs. 11 per unit and buy 100 units at that price.

E is prepared to pay Rs. 10 per unit and buy 100 units at that price.

F (marginal consumer) is prepared to pay Rs. 7 per unit and buy 100 units at that price.

The one uniform price which will suit all the three purchasers will be the one that is low enough to induce the least anxious of the consumers to purchase, that is, Rs. 7. Since D and E are prepared to pay Rs. 11 and Rs. 10 they will of course buy all the more readily if the actual price happens to be lower.¹ Thus for the given amount of a commodity, namely

¹ We must not imagine that the more eager purchasers will go about shouting

300 units, which changes hands, the price must be such as to satisfy the least anxious producer whose contribution is necessary to make up the total, and it must at the same time be such as to attract the least anxious among the purchasers who must come in if the whole of the commodity is to be bought. In our example, Rs. 7 is this price. This price is calculated to give satisfaction to the greatest number of buyers and sellers. It will satisfy six people, namely *A, B, C, D, E* and *F*. The price of Rs. 5 will satisfy only four, namely, *A* among the sellers, and *D, E* and *F* among the buyers. The price of Rs. 6 will satisfy five people, namely, *A, B, D, E* and *F*. The price of Rs. 11 suits only four, namely, *A, B, C* and *D* and Rs. 10 suits only five, *A, B, C, D* and *E*.

§15. Divisions of the problem of value.—In the above section we have given a general outline of the theory of value. Now we proceed to consider some important details of it. The proposition that value depends upon (marginal) supply and (marginal) demand, we shall find, varies as to its interpretation according to the period we are considering. This leads us to the famous distinction between Market Value and Normal Value.

§16. Market value and normal value.—Market value is the current price of a commodity, i.e. its price at any moment, and may be regarded as the temporary equilibrium price (balancing temporary demand and supply). On the other hand, the normal value of a commodity is the price which economic forces will bring about in the long run and may be regarded as the normal (long-period) or permanent equilibrium price (balancing normal demand and supply). We shall discuss the two cases separately.

§17. The equilibrium of demand and supply in the case of market value.—A diagram such as Fig. 8 is commonly used to illustrate how market price is determined :

In the above figure quantities are measured along the line *OX* and prices along *OY*. *SS*¹ is the supply curve. It slopes upwards, showing that larger supplies are attracted as prices rise, thus inducing the less anxious among the sellers to bring in their supplies. *DD*¹ is the demand curve. It slopes downwards, showing that larger quantities will be demanded as

that they would really be prepared to pay more than the market price. Similarly, the more anxious among the sellers would not proclaim from the rooftops their willingness to accept lower prices if necessary. The higgling of the market consists in each party concealing his eagerness as far as possible so as to get the best of the bargain. But all the same, after a series of tentative approaches, the equilibrium price, appropriate to a given position of supply and demand, establishes itself.

prices fall, thus inducing the less anxious among the purchasers to buy. AH is the only price which will reconcile the opposite points of view of the suppliers and the purchasers. At that price the quantity offered for sale coincides with the quantity which purchasers are willing to take. AH is the equilibrium

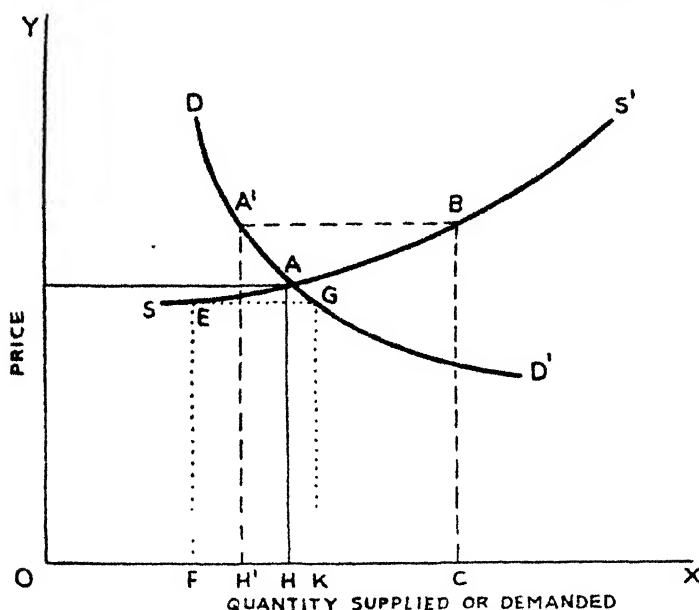


FIG. 8.—DIAGRAMMATIC REPRESENTATION OF HOW MARKET VALUE IS DETERMINED BY THE BALANCING OF DEMAND AND SUPPLY

price, so called because once established it is not likely to be disturbed. Any other price is unstable or likely to be disturbed. For example, take a higher price, namely $A'H^1$. At this price OC is supplied but only OH^1 is demanded. That is, sellers are more anxious to sell while buyers are less anxious to buy. So prices will come down until again the stable price AH is reached. Similarly any price lower than AH is unstable. For instance, at price EF only OF is supplied, while OK is demanded. That is, buyers are more anxious to buy and sellers are less anxious to sell. Therefore the prices will rise until AH is reached again. The principal thing to be remembered in the case of market value is that here supply means supply in hand or in sight, i.e. stocks already on offer in the market including any changes in them that could possibly be effected almost at once. The fact that the quantity actually available at any given time has to be taken as un-

changeable for the time being has important consequences. For instance, supposing that for some reason demand for the commodity in question rises (that is, people are prepared to pay a higher price for the same quantity or to purchase larger quantities at the same price), what will be the immediate effect? We can confidently answer this question by saying that the immediate effect will be a rise in price. This is how market value is affected.

§18. The equilibrium of demand and supply in the case of normal value.—But the question as to what will be the effect of this in the long run, or in other words how normal value will be affected, cannot be answered so briefly or so confidently. The higher demand and higher price, if they persist for any length of time, will influence the supply.¹ Because of the higher price more capital will flow into the industry, existing establishments will be enlarged and new establishments will appear. Supply, though it cannot be increased immediately, will thus eventually be increased. We cannot say off-hand what will be the effect on price of this increased supply, because that will depend on the conditions governing the production of the commodity. If the Law of Diminishing Returns is in operation, the rise in price (which, as we saw, must occur immediately if demand is keener) will be permanent. If the Law of Constant Returns is in operation, there will be no change in price. Only more will be sold at the same price. But if the Law of Increasing Returns is in operation, this means that with the increase of scale of production the cost of production per unit will go down, and therefore the price also will be lower. So the long-period effect of the increase of demand may be (i) a higher, (ii) the same, or (iii) a lower price, according to these different circumstances.

The matter can be argued on the same lines on the assumption that there is a fall in demand. The immediate result of this will be that the market price will be lower than the cost of production. Because, while demand has fallen, supply cannot immediately be curtailed appreciably. The stocks that are there must somehow be got rid of. It also takes time to transfer capital and labour from one kind of production to another. So that, in spite of lower prices and lower profits, practically the same quantity will for the time be offered for

¹ This, of course, does not apply to goods the supply of which cannot possibly be increased, e.g. paintings of old masters or old coins. The majority of goods, however, are of the reproducible type, i.e. they are being constantly produced and constantly consumed, and most of our reasoning in economics is in connexion with this type of goods.

sale. But ultimately, the process of the transfer of capital and labour and curtailment of scale of production will make itself felt, and supply in the market will fall off. Whether the final effect of this falling off will be a higher or lower or the same price will again depend on which of the three Laws of Production is in operation. Assuming diminishing returns, a smaller supply will mean a lower price. With increasing returns, a smaller supply will raise the cost of production and therefore the price. With constant returns, the price will remain the same; but the quantity sold will be less.

§19. Determination of normal value under the three Laws of Returns.—The diagrams of Fig. 9 illustrate how normal value is determined and bring out the influence of the Laws of Returns on normal value. Suppose demand has risen from DD^1 to D^2D^3 , then (i) with Diminishing Returns (or Increasing Cost) the new normal equilibrium price will rise from P^1P to KN (as in diagram *a*); (ii) with Increasing Returns (or Diminishing Cost) it will fall from P^1P to KN (as in diagram *b*); and (iii) with Constant Returns (or Constant Cost) the new equilibrium price will be the same as before (as in diagram *c*).

If we want to consider the effects of a fall in demand we can reverse the above argument and suppose the original demand is represented by D^2D^3 . It now falls to DD^1 . Then (i) with Diminishing Returns the new normal equilibrium price will fall from KN to P^1P (as in *a*), (ii) with Increasing Returns, it will rise from KN to P^1P (as in *b*), and (iii) with Constant Returns it will remain unchanged (as in *c*).

§20. Conclusions regarding market and normal value.—Because, generally speaking, supply cannot be adjusted at once in response to changes in demand, we say that for market value demand is more influential than supply, i.e. the marginal utility to consumers of the available supplies mainly governs value. That is, price may for a time be out of relation to cost of production. With normal value a sufficiently long time is assumed for economic forces to work themselves out and fully adjust the supply to a given change in demand, and therefore we say that here supply is more influential than demand. That is, price must in the long run correspond to the (marginal) cost of production. We must, however, again emphasize the truth that in market value as well as in normal value the supply and the demand side are both there, as they must be in every phenomenon of value.¹

Market value is determined by the conditions of supply and demand actually effective at any given time. But with every

¹ See §18.

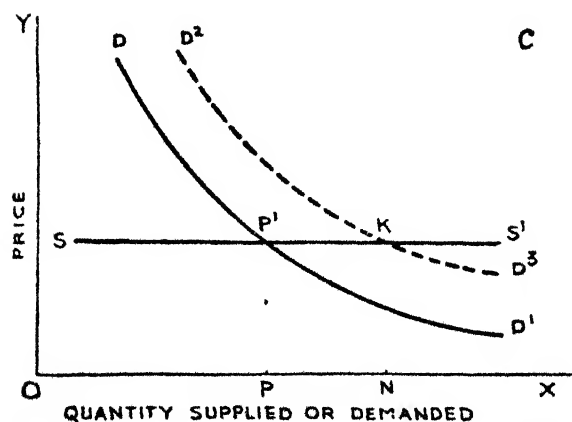
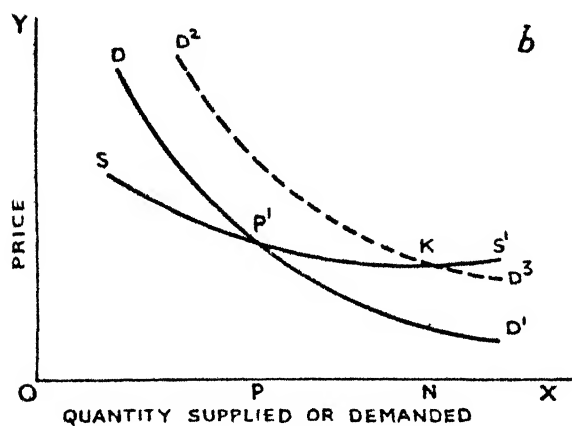
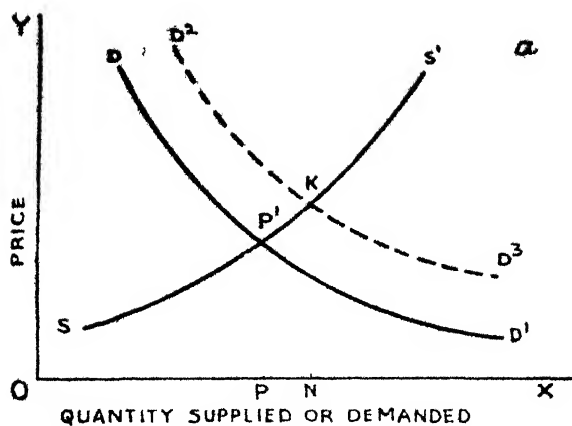


FIG 2.—DIAGRAMS ILLUSTRATING THE DETERMINATION OF NORMAL VALUE UNDER (a) INCREASING COST (OR DIMINISHING RETURNS), (b) DIMINISHING COST (OR INCREASING RETURNS), (c) CONSTANT COST (OR CONSTANT RETURNS)

day that passes there may be some little adjustment on the side of supply, so that gradually market value will be drawn towards normal value.¹ The greater the degree of adjustment the more will market value approach normal value. The more readily the supply can be increased or decreased as required, the quicker and closer will market price conform to cost of production.

Again, there may be certain temporary influences which may act upon market value, pushing it up or down. For example, suppose there is a boom in cotton; speculators start buying it feverishly and this will send up the prices. But when more normal conditions of demand are restored the prices will again come down to their usual level. It is in this manner that market value is spoken of as hovering round normal value. In short, market value reflects the conditions of demand as they exist at any given time. Normal value reflects the more permanent conditions of demand and supply, enough time being allowed for their effects to be fully worked out. It will thus be realized that the *time element* plays a very important part in the theory of value and that on it is based the distinction between market value and normal value.

If we firmly grasp the idea that both supply and demand are fundamental causes of value, we shall be able to see the fallacies of some of the earlier theories, most of which erred in emphasizing either the supply side or the demand side to the exclusion of the other. Thus the Utility Theory of Value was mistaken because it ignored the supply side and made it appear as if value depended solely on utility or demand. The Labour Theory (or the Cost of Production Theory) was mistaken in that it neglected the demand side and placed exclusive emphasis on the supply side as the determinant of value. The correct theory of value is the Marginal Theory as explained above, which brings out the significance of both supply and demand.

§21. Cost of production.—We may now proceed to analyse further some of the terms and ideas used in the preceding sections. We will first consider the conception of cost of production. In the first place, a distinction may be drawn between (i) *real cost of production*, which means the actual efforts and sacrifices of various kinds required for the production of a

¹ With every change in conditions of supply and demand there will be a new normal value towards which market value will move. But the main point to remember is that every given position of supply and demand has its normal value, and the market value tends to approximate to the normal value which is normal with reference to this particular position.

commodity, and (ii) *money cost* or *expenses of production* which means the money payments for these different efforts and sacrifices in the form of wages, interest and profit. In economic discussions, the term 'cost of production' is very often used in the sense of expenses of production. But if we are particular, the latter term should be used only when we mean the money costs. A further distinction is drawn between (i) *prime, special, or direct cost*, and (ii) *supplementary or on-costs*. The *prime, special or direct cost* refers to such items of the cost of production as vary in direct proportion to the output (e.g. the amount of raw materials consumed, the labour power required, and the wear and tear of machinery involved). The *supplementary costs (on-costs)* include those standing charges on account of durable plant, salaries of the superior employees, and other establishment (overhead) charges which must be incurred whatever the volume of the output. These two elements together make up the total cost of a commodity and price in the long run must cover this total cost, although during short periods of depression, or excessive competition things may be sold at less than the total cost at a price just sufficient to cover the prime costs. But unless in the long run the price covers the total cost, production will cease.

§22. The Representative Firm.—We have said above that marginal supply (which is the same thing as marginal cost) determines the supply price of a commodity. It is the cost of that unit of the supply which is just worth the producer's while to offer or contribute to the market. In every industry the costs of different producers are different. Some have exceptional abilities and other advantages and their costs are low. Some may be just struggling into business with the greatest handicaps in these respects and are thus leading a precarious existence. We cannot, therefore, regard the conditions of supply by such individual producers or firms as typical of the industry. As Marshall suggests, we must leave aside both these types of producers or firms, and select what may be called an average or 'Representative Firm, which must be one which has had a fairly long life and fair success, which is managed with normal ability, and which has normal access to the economies, external and internal, which belong to that aggregate volume of production'.¹ It is the cost of production of this average or mature representative firm that determines the normal supply price of a commodity. The superior firms conducted by men of extraordinary ability or enjoying other exceptional advantages, will therefore make extraordinary pro-

¹ Marshall, *Principles of Economics*, p. 317.

fits. The most inefficient firms will sooner or later be eliminated, and their costs do not determine price. They are under-sold by the better-managed firms with lower costs, and are eventually pushed out. One of the advantages of perfect competition is such elimination of unfit firms and the survival of 'optimum' or 'representative' firms. The true marginal cost, therefore, which governs price, is the cost of production per unit of the output in the representative firm.

§23. **Values of complementary goods.**—We have so far considered simple values of goods considered separately. We shall now proceed to consider the question of values of complementary or connected goods. Goods which are combined so as to form an economic whole are called complementary goods. Let us first consider the values of complementary goods on the demand side and then on the supply side.

(i) *Joint demand.*—Things are said to be in joint demand when what is wanted to satisfy certain kinds of demand is not

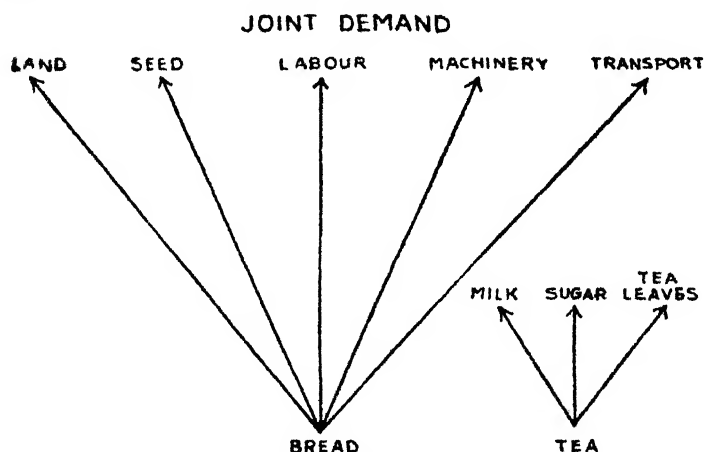


FIG. 10a.—JOINT DEMAND

a single article but a combination of articles (e.g. ink and pen, golf clubs and golf balls, pipe and tobacco). Then again a demand for a finished commodity involves an indirect or derived demand for its factors of production. Thus the demand for bread involves a joint demand for land, seed, labour, agricultural implements, transport, etc. (see Fig. 10a).

An increase of demand for the ultimate product will generally bring about an increase in the prices of the constituent factors, but the increase is not necessarily uniform. That constituent will increase most in price whose supply is compara-

tively difficult to increase and which is also indispensable. It is clear that this constituent will absorb the greater proportion of the increased price of the ultimate product. Any constituent whose supply is plentiful and can be easily increased will show a comparatively small rise of price.

(ii) *Composite demand*.—Demand is said to be composite when a commodity is in demand for two or more different purposes or uses. Thus the demand for coal is compounded of the demand for it in households, in factories, in railways

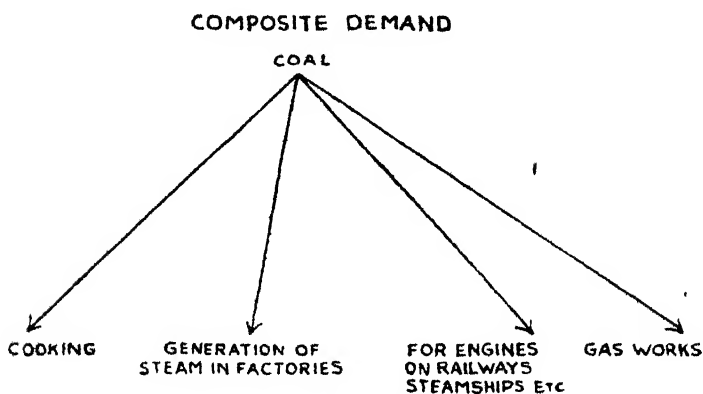


FIG. 10b.—COMPOSITE DEMAND

and in gasworks (see Fig. 10b). Similarly, many raw materials like rubber, leather and steel can be put to different uses and the demand for them is therefore composite. The price of such an article is fixed by the competition of its buyers for the several uses.

(iii) *Alternate demand*.—Demand is said to be alternate when it can be satisfied in alternative ways. Thus the demand for light is an alternate demand for electric and gas or kerosene-oil lights. The demand for hot drinks is an alternate demand for tea and coffee. The price of one influences the price of the other. If tea rises in price consumers will, to some extent, substitute coffee for tea. But this in its turn will raise somewhat the price of coffee.

(iv) *Joint supply (cost)*.—We shall now consider complementary goods on the supply side. Corresponding to joint demand we have joint supply when the supply of one article necessarily involves the supply of another. Wheat and straw, cotton and cotton seed, gas and coke are examples of joint supply (see Fig. 11a). The costs of production are here chargeable jointly to the articles produced in combination. The rail-

way service offers a case of joint costs, since most of the standing costs are jointly incurred for goods and passenger traffic, and for mail and passenger trains. A passenger train may have first, second and third class carriages, but the greater part of the cost of running the train is constant and does not vary much according to whether the train consists of different

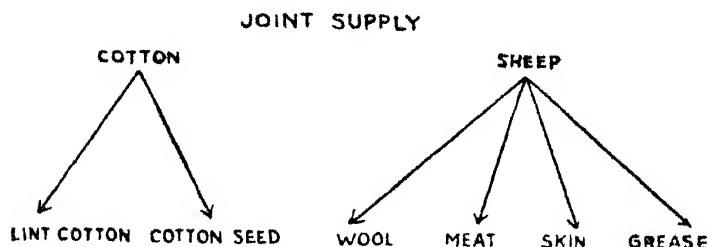


FIG. 11a.—JOINT SUPPLY

classes or not. For instance, the cost of maintaining the permanent way and the cost in connexion with the establishment, including stationmasters, signalmen, etc., have all to be incurred without reference to whether the train has only one class or more. The railways require a large fixed capital which is put to varied purposes, such as carrying goods or carrying passengers. Certain simple rules regarding the prices of joint products may be stated :

(a) The prices of the joint products must together be enough to cover the joint costs of production.

(b) But the apportionment of price depends upon the relative demand for the commodities jointly produced, i.e. on the marginal utility of each. Thus usually the demand (marginal utility) for a pound of cotton is greater than that for a pound of cotton seed and, therefore, the former sells at a higher price and the latter at a lower price. If, further, the demand for cotton increases there will also be an increased supply of cotton seed along with that of cotton, and the price of cotton seed will go down, but the price of cotton will rise and thus the joint prices of the two commodities will be such as to cover the joint costs.

(c) Usually each article entails some special cost to make it marketable and it is clear that it must sell for at least its special cost.

The principle of joint cost is found to have a wide application today owing to the growing influence of chemical science, which is making possible the wide-scale utilization of by-products.

(v) *Composite supply*.—Supply is said to be composite when a thing is produced from several rival sources. Thus sugar is manufactured from cane and beetroot; conveyance in a modern city is supplied by various means like trains, taxis, horse carriages, trams (see Fig. 11b). As Marshall says: 'A demand can often be satisfied by any one of the several competitive routes, according to the principle of substitution. These various routes are rivals or competitors with one another. . . But in relation to the demand they co-operate with one another; being "compounded" into the total supply that meets the demand.'¹ The principle of substitution, as seen above, exercises

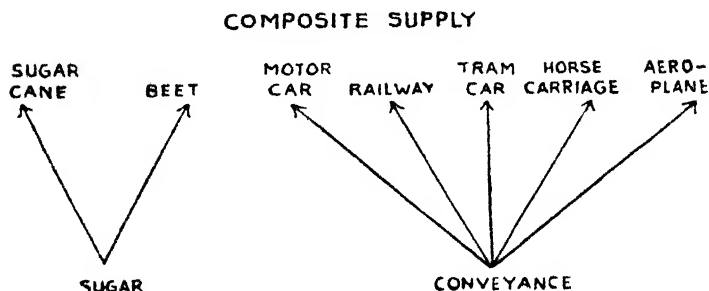


FIG. 11b.—COMPOSITE SUPPLY

a moderating influence upon the prices of the several complementary supplies.

(vi) *Alternate supply*.—Supply is said to be alternate when a given set of factors of production can be used to turn out more than one class of goods, though only one at a time. Thus land can be cultivated alternately so as to yield a crop of wheat or barley, or may be put under grass, whichever use is more profitable for the time being.

The foregoing survey of complementary goods shows how their range is extensive and is constantly expanding in the modern economic organization, making the values of many individual goods dependent on the values of other goods. The theory of value, however, is not fundamentally affected by this complication.

§24. What is a monopoly?—Monopoly is the negation of competition. When the whole, or practically the whole, supply comes from one producer, he can fix any price that may suit him best. Under competition each producer has to take care that his own prices are not higher than those quoted by his

¹ *Principles of Economics*, p. 390.

rivals. Monopoly thus implies effective price control—usually on the part of the producers.¹

§25. **Classes of monopolies.**—Chapman² suggests the following classification of monopolies: (i) Natural, (ii) Social, (iii) Legal, and (iv) Voluntary.

(i) *Natural monopolies* arise as the result of limitation of nature's supply of raw materials. The supply may be small and confined to certain parts of the globe (e.g. diamonds in South Africa, oil wells in Iran, Burma, the U.S.A., and water-power sites as in the Western Ghats).

(ii) *Social monopolies.*—Competition is regarded as undesirable in the case of certain public utility or quasi-public enterprises. In such cases it is either not allowed at all or is strictly limited on grounds of economy and public convenience, e.g. a number of competing railways covering the same tract would be uneconomical and inconvenient to the community at large.

(iii) *Legal monopolies* are those created by law for promoting general progress and encouraging invention (e.g. patents and copyrights conferred upon inventors and authors, and trade marks). Some social monopolies also enjoy legal support (e.g. railway companies require legal permission to lay down the railway track).

(iv) Finally there are the *voluntary monopolies* which arise (a) from the absorption by one business unit of other business units, or from elimination of rivals by cut-throat competition, or (b) from the purchase of competing businesses or from more or less voluntary agreements between different firms. These monopolies broadly fall under two classes, namely trusts and cartels, which we have already dealt with.³

§26. **Monopoly value compared and contrasted with competition value.**—A monopoly may be defined as a condition of production in which a single person, or a number of persons acting in combination, have power to fix the price and to leave the demand to determine the quantity that can be sold at that price (or to put it the other way round, the power to fix the quantity offered for sale and sell it at such a price as is necessary to induce the purchasers to buy the whole of that quantity). The monopolist producer and the producer under competition are both moved by the same desire, namely the desire for the maximum profit obtainable in the given circum-

¹ Monopolies may sometimes arise on the demand side, i.e. we may have buyers' monopolies when there is only one buyer or a number of buyers combine and are in a position to dictate prices. Such cases, however, are comparatively rare.

² Op. cit., pp. 148-4.

³ See ch. viii, §27.

stances. Under competition, however, each producer has to reckon with rivals and, as we have already seen, the price under these conditions will approximate to the expenses of production. The monopolist, on the other hand, can, in theory, fix the price at any level he chooses above the bare expenses of production. He has no need to fear that somebody else will undersell him and attract all the consumers to himself. Under competition the (marginal) expenses of production give the minimum below which the prices will not fall as well as the maximum beyond which they will not rise. Under monopoly the prices will of course not be less than the expenses of production, but theoretically they are subject to no maximum limit.

It would, however, be a mistake to suppose that the monopolist's interest always lies in pushing up his prices higher and higher; for he must consider the effect of such a procedure on demand, which will shrink as prices rise. In fact, on the demand side, the problem of value under monopoly remains the same as under competition. The Law of Demand, which tells us that in the case of every commodity, to a greater or less extent, every rise in price will cause demand to contract and that every fall will similarly cause it to expand,

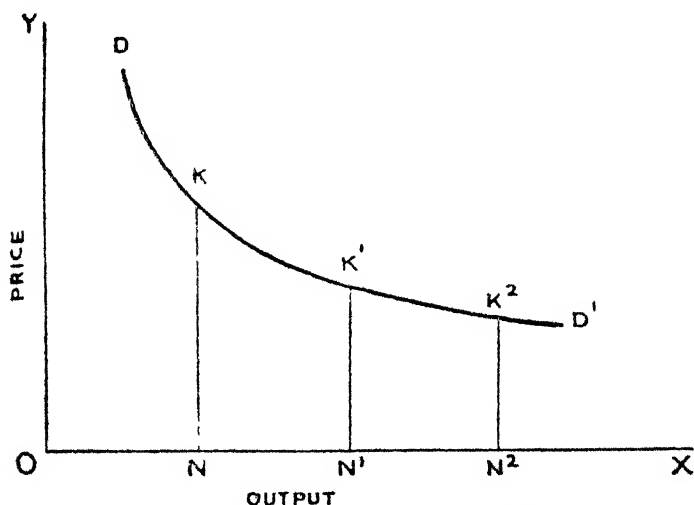


FIG. 12.—DIAGRAM ILLUSTRATING THE MONOPOLIST'S LIMITATIONS IN PRICE OR OUTPUT

remains in operation under monopoly as under competition. If the monopolist therefore desires a very high price, he must restrict his supplies. At any given time, every conceivable price is linked together with a certain definite quantity which

alone can be sold at that price. *The monopolist can fix either the price or the output but not both.*

In Fig. 12, DD^1 is our usual demand curve. According to this figure the monopolist cannot, for example, fix his output at ON^2 and expect to be able to sell it at price KN per unit. If he decides to fix the price at KN , the output is automatically fixed for him, because at price KN he can only sell quantity ON . Or, which comes to the same thing, he can decide on output ON , in which case he finds that the price must be KN , because he will not be able to sell quantity ON at any price higher than KN , however much he may wish to do so. *Out of any number of possible prices the monopolist endeavours to choose that price which yields him the highest net income or the highest net monopoly revenue.* 'Net monopoly revenue' means the total amount realized at a certain price *minus* the expenses of producing the quantity that can be sold at that price. The expenses of production, it must be remembered, include among other things normal profits secured under conditions of competition.

§27. Considerations governing monopoly value.—In the examples given below (A, B and C) the considerations determining the price and output yielding the highest net monopoly revenue have been indicated in each case.

We cannot say off-hand whether the monopolist stands to gain most by a comparatively high price or a comparatively low price, without studying the demand and supply schedules of the commodity in question. Other things remaining the same, the monopolist's interest lies in (i) securing as high a price as possible for each unit sold, while at the same time (ii) selling as large a quantity as possible, and (iii) reducing as much as possible the cost of production per unit.

(A) In the case of a commodity the demand for which is inelastic, prices may be raised without the demand being appreciably curtailed in consequence. If the commodity is also subject to the Law of Diminishing Returns, so much the better for the monopolist. Because even if the demand shrinks to some extent as the result of a rise in prices, this may be more than counterbalanced by the decrease in the cost per unit of the smaller output.

(B) Similarly, the interests of the monopolist are likely to be best served by fixing prices at a low level in the case of elastic demand and increasing returns. For the lowering of the price in this case is likely to be more than offset by expansion of demand, while the increased output will mean decreased costs of production.

(C) Finally, in the case of articles subject to the Law of Constant Returns, the monopolist can almost exclusively concentrate his attention on demand since there are no changes in cost, which indicates only the lower limit to the price which will be fixed according to the elasticity or inelasticity of demand. If demand is elastic, price will be low, if inelastic, price will be high.

Thus in all cases of monopoly value, the monopolist must carefully weigh two main factors: (i) the nature of the demand, and (ii) the expenses of production per unit.

§28. Illustration of monopoly value.—Finally we may give an example to show how price would be fixed in practice by the monopolist. Let us take the case of copyright books with elastic demand and subject to diminishing cost (Case B above):

| (1) Output, or size of the edition | (2) Cost per copy in Rs. | (3) Aggregate cost in Rs. | (4) Demand or sale price in Rs. | (5) Aggregate receipts in Rs. | Net monopoly revenue (5 minus 3) in Rs. |
|--|-----------------------------------|------------------------------------|---|--|---|
| 4,000 | 6½ | 26,000 | 7½ | 30,000 | 4,000 |
| 6,000 | 5 | 30,000 | 6 | 36,000 | 6,000 |
| 8,500 | 4 | 34,000 | 4½ | 38,250 | 4,250 |

From this example it is clear that neither the highest price (Rs. 7½) nor the lowest one (Rs. 4½) per copy will yield to the monopolist the maximum monopoly gain. The medium price of Rs. 6 per copy will be the most suitable price since it will yield the highest monopoly profit (Rs. 6,000), the number of copies sold being 6,000.

In Fig. 13 the data given above are graphically illustrated. The three alternative prices are PK , P^1K^1 and P^2K^2 . The shaded rectangles represent the net monopoly gain in each case. Rectangle II represents the largest monopoly revenue, thus showing that P^1K^1 is the best price for the monopolist. Under competition the price would be determined at the point of intersection of SS^1 and DD^1 , namely at P^3 , and would be P^3K^3 . Similar diagrams could be drawn to illustrate the determination of monopoly prices under increasing cost and constant cost. How far the monopolist succeeds in hitting upon just the price which will maximize the net revenue depends upon the correctness with which he can make his calculations regarding the reactions of demand to varying prices and the cost of producing different quantities. To some extent he may be able to base his estimates on actual experiments with different prices and quantities, but largely he will have to depend upon

his insight and business acumen in deciding which prices will be most profitable.

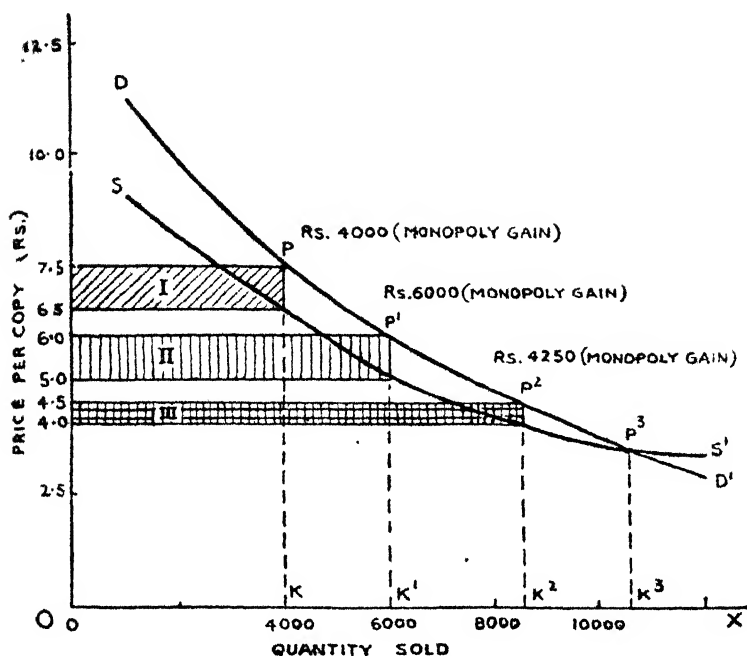


FIG. 13.—DIAGRAM ILLUSTRATING THE DETERMINATION OF MONOPOLY PRICE UNDER INCREASING RETURNS (OR DIMINISHING COST)

§29. Is monopoly necessarily detrimental to the consumer?—

The popular notion is that a monopoly must necessarily be injurious to the interests of the consumer because it is supposed that the monopolist's prices will usually be higher than competitive prices. But this need not always be so. In the first place, the cost of production under monopoly may be distinctly lower than if the same aggregate output were to be produced by a number of comparatively small competing producers. Even under competitive conditions, large-scale production is of course possible; but it is easier to realize its well-known economies under monopoly than under competition, by 'concentration of the best-equipped plants which are worked regularly at high pressure', by 'standardizing the product or the service, and thus increasing the general productivity of the organization'. An individual producer may again be deterred from introducing improvements because these are very soon copied by his rivals. A monopolist, on the other hand, is sure

of himself reaping the whole benefit of any of his economical devices and therefore he is readier to adopt them. While all these economies will send down the cost of production below the competitive level, the monopolist may find his greatest gains in selling a large output at as low a price as possible, and the resulting price may actually be lower than under competition. Here the interests of the monopolist and the consumer happen to coincide. But even when the immediate advantage of the monopolist may seem to lie in fixing a pretty heavy price there are several considerations which may lead him to keep the price within moderate limits. We may mention some of these *restraining influences* :

(i) The possibility of substitution.—Goaded by too high a price consumers will try hard to find some substitute and often succeed in doing so.

(ii) The monopolist by his tactlessness may drive consumers to combine against him.

(iii) The public resentment due to his action may lead to Government interference and regulation. The Government may even decide to take over the industry itself.

(iv) Competitors, who may not be there in the beginning, may at last appear. From the high prices charged by the monopolist they will infer high profits and try to share them.

(v) Occasionally the monopolist may happen to be a man who has a social conscience. He may desire to combine reasonable profits for himself with the promotion of public welfare through moderate prices. It is natural that this solicitude for public welfare should be expected more as a matter of course when the monopoly is in the hands of the State or a public body like a municipality.¹

§30. Evils of monopoly.—Although, as shown above, monopolies need not necessarily be detrimental to the interests of the consumers, there is a good deal of popular prejudice against them and some explanation of this fact is necessary. Part of the explanation is that the monopolist often shows a thoughtless preference for unreasonably high prices, where low prices would in reality be more advantageous even from his own purely selfish point of view. He generally acts by rule of thumb without careful and intelligent calculation and on the mistaken assumption that the higher the price, the greater must be the benefit to himself. Another evil associated with monopoly is price discrimination, that is, charging different prices to different people in the same market (a thing which cannot occur under competition), or different prices in different areas in the

¹ See ch. xvii; also read Marshall, *Principles of Economics*, pp. 488-9.

same country.¹ Discrimination between one customer and another may be prompted by the desire on the part of the monopolist as far as possible to absorb the whole of the consumer's surplus. If, for example, in the judgement of the monopolist customer *A* will be prepared to pay Rs. 10 for the article, he will charge him Rs. 10; if customer *B* is only prepared to pay up to Rs. 7, he will charge him Rs. 7 and so on. (The first edition of a novel is often highly priced and is followed by a cheaper edition.) Or it may simply be due to favouritism—favouring powerful customers and tyrannizing over weaker ones. Lastly, monopoly may spell stagnation in industry. Without the stimulus of competition producers are likely to be unenterprising and conservative and the industry will therefore remain in a backward condition.²

Another danger from monopoly is that the powerful monopolistic combinations may be a source of grave menace to the State and may use political corruption to secure their ends.³

§31. **Value under imperfect competition.**—The question of value has been discussed above first on the assumption of perfect competition and then on the assumption of complete monopoly. There are, however, intermediate positions between these two extremes commonly to be met with in real life and we have now to see how value is determined under conditions of imperfect competition.

An important implication of 'perfect competition' is that no single seller or single purchaser is able, by his individual action, to influence the price except to a negligible extent. Suppose, for example, that 10,000 units of a certain commodity are sold by 10,000 sellers to 10,000 purchasers, each seller selling one unit to one purchaser. Let us imagine that an individual seller increases the amount he offers for sale as much as 100 per cent. This would merely mean that the total quantity on sale is 10,001 instead of 10,000. The increase would therefore be too slight to bring down the market price. A decrease of quantity on the part of a single or a few sellers would likewise have practically no effect in raising the price. Similarly we can argue that individual purchasers would have no power to influence the price by even considerable variations in their demand.

Competition among suppliers may, however, be imperfect

¹ The variant of this practice under which lower prices are charged for the same goods in foreign markets as compared with those in the domestic market, known as 'dumping', is discussed in ch. xii, §11.

² As the reader will notice in ch. xii, §10, this is one of the principal arguments against protectionism.

³ See ch. viii, §28.

because (e.g.) instead of being numerous they are few in number; whether the reason for this is legal restriction or the heavy initial outlay of capital necessary for certain enterprises like railways, or anything else. When the number of producers is thus small, each will be in a position to exercise a powerful influence on price. In the above example, if the 10,000 units supplied by four producers each only producing 2,500 units, a 100 per cent increase in the supply by one of them would mean an increase of 2,500 units and therefore an appreciable fall in price; similarly a 100 per cent decrease would mean an appreciable rise in price.

It is of course true that although the number of competitors may be small, competition among them may be intense. But the fact that they are few in number makes combinations among them possible, and by common agreement they may restrict the total supply and bring about a rise in price. But even apart from such agreements and understandings, the fact is important that when supply is in the hands of only a few producers, each is in a position to vary considerably the total amount offered for sale and thus materially to influence the price. Under perfect competition so far as any individual producer is concerned, the market price has to be taken as something invariable and beyond his control.

Another implication of perfect competition is that consumers always know at what prices a commodity is being sold in different parts of the market and will make their purchases where the lowest price is quoted. But for various reasons this may not actually happen. Sometimes consumers may not know the prices in different places. Or again, although the prices in certain places may be lower, the cost of bringing the commodity to the consumer may be prohibitive. Finally, owing to irrational prejudice against particular sellers, consumers may not buy from them although the article is exactly the same and is offered at a lower price.

Under perfect competition, the most powerful method by which each competitor can hope to make headway against his rivals is to sell his article cheaper. He must therefore try to reduce his costs as much as possible. Up to a point this can be done by increasing the scale of production. It is worth while producing more so long as this brings down the average cost per unit. Production will be expanded until the process of reduction of average cost ends and the cost of the last unit added neither brings down nor increases the average cost, that is to say, until it just equals the average cost. Since every unit can only be sold at the prevailing market price, production

will stop at a point beyond which an additional unit would raise the average cost. For example, if the costs of successive units are 7, 6, 2, the average cost is $\frac{7+6+2}{3} = 5$. If the next unit costs 5, the average cost will not go up. But if another unit is added and it costs more than 5, say 6, the average cost will be more than 5. It will be $\frac{7+6+2+6}{4} = 5\frac{1}{4}$. Therefore it will not be produced. Under perfect competition, therefore, the following equation holds good: Price = Average Cost (of optimum or representative firm) = Marginal Cost (i.e. cost of the last unit produced).

Under imperfect competition, however, this link between price and cost will be snapped. As explained above, the individual producer will now have considerable control over price through increase or decrease of his supply. He will as a rule be chary of increasing the supply because he knows this will mean a lower price, not merely for the additional units but for the whole of his supply. He will therefore restrict the scale of his production and put a limited quantity on the market and sell it at a high price in order to maximize his profit. In this manner, under imperfect competition, firms will tend to be smaller in size than the optimum, there will be less cheapness and plenty and further there will be the possibility of different prices being charged to different groups of consumers. In short, the consequences of imperfect competition will be the same in character as under a complete monopoly although their intensity will be less.¹

SUMMARY

Economic progress requires specialization or division of labour and this in turn necessitates *exchange*. The phenomenon of exchange gives rise to the central problem in economics, namely the problem of value.

Voluntary exchange among normally intelligent men must result in gain to both parties to the exchange.

In the course of progress the inconvenient and clumsy method of exchange by barter gives place to exchange effected through the medium of money. Besides money, a developed system of exchange rests upon a proper system of merchant middlemen and of transport.

The consideration of exchange naturally leads to a consideration of *markets*. The essential idea of a market is not some definite locality where things are offered for sale, but the presence of effective competition leading to uniformity of price throughout the extent of the market.

¹ This discussion of Imperfect Competition is mainly based on Meade, op. cit., pp. 96-126.

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The following *conditions* are favourable to the development of wide markets, and their absence will tend to make markets narrow: (i) Effective means of communication; (ii) Portability; (iii) Easy cognizability (through grading, sampling, etc.); (iv) Durability of the goods dealt with; and (v) Existence of a large and steady demand.

One of the characteristics of modern markets is the development of *speculation* or dealings in futures. A speculator may either 'sell short' or 'buy long'. He will do the former if he expects prices to fall and the latter if he expects them to rise.

Speculation is a socially beneficial activity provided the forecasts of speculators are based on intelligent and painstaking study, because it makes inevitable fluctuations of prices gradual instead of sudden, so that people get time to adjust their consumption to the change. Producers also benefit because professional speculators can guarantee to them the supply of their raw materials at fixed prices, which saves them much worry and inconvenience. Sound speculation on the stock exchanges directs the course of investment into the most fruitful channels.

When speculation degenerates into mere gambling it acts injuriously upon society, by springing upon it sudden and unexpected changes in prices of goods and securities, causing serious economic dislocation, and bringing unmerited suffering on thousands of innocent people.

It is, however, very difficult to devise suitable checks. Legislation is found either to be ineffectual or to hit legitimate as well as undesirable speculation. Reliance must be placed mainly on fostering higher standards of business morality and social responsibility.

For a correct understanding of the phenomenon of *value*, it is necessary to appreciate the fact that value depends both on supply and demand. Modern analysis has shown that what is significant in this connexion is *marginal supply and marginal demand*.

The famous distinction between *market value* and *normal value* turns on the period considered. In market value the reference is to the price at any given time, and the forces of supply and demand that we have to consider are those actually operative at that time. These forces are constantly changing because we are living not in a static but in a dynamic world. But the immediate or short-period effects of these changes on value (or price), with which we have to do in market value, may be different from the ultimate or long-period effects, with which we are concerned in normal value. In normal value we assume that enough time is given for tendencies set up by any changes in conditions of supply or demand to work themselves out completely. Thus suppose there is a rise in demand. Supply will then tend to increase. But the increase takes time. In the meanwhile the market price will rise because here supply means what happens to be actually available. But in the long run when supply does increase, we shall have a level of prices appropriate to this increase and the cost of its production.

Gradually the day-to-day or market price will show the influence of adjustment on the side of supply, and market price will approach normal price more and more closely.

In market price again, any purely temporary influence will make itself felt. But being temporary it will disappear and leave the market price to be

influenced steadily by the permanent forces, so that it will gravitate towards normal price. Such is the relation between market value and normal value.

In market value, demand is more influential than supply, which is to be taken as, for the time, unalterable. In normal value, supply may be regarded as the more influential factor, a certain changed condition of demand being assumed to persist while the supply is being adjusted to it. The term 'cost of production' is sometimes used to mean (i) *the real cost of production*, i.e. the actual effort and sacrifice undergone by the suppliers of the different factors of production, or (ii) *the expenses of production*, i.e. the money payments in the form of wages, interest and profit necessary to call forth the different kinds of effort or sacrifices.

Another useful distinction is between (i) Prime, Special or Direct Cost, i.e. such costs as vary with output, and (ii) Supplementary or On-Costs, i.e. such costs as do not vary whatever the output. The two together make up the total cost of production which price must ultimately cover.

Seeing that the cost of production varies from firm to firm we want to know whose cost of production it is that determines price (or that price must cover). For this purpose we have the notion of the *representative firm*, i.e. a firm managed with normal ability and enjoying normal access to internal and external economies. Firms less than normal in these respects will sooner or later succumb to competition and their unduly heavy costs of production will not influence price.

Demand is said to be *joint* when its satisfaction requires the use of more than one article in combination. Changes in such demand will bring about changes in the prices of the several constituent articles according to the relative difficulty of supply and the extent to which each is indispensable.

Demand is said to be *composite* when a commodity has more uses than one. The total demand for the commodity is the aggregate of the demands for each several use. The competition of its buyers for its several uses is one of the forces governing the price of such a commodity.

Demand is *alternate* when substitutes are available. Thus if we want light, we may use electricity or gas or kerosene oil. The prices of such substitutes are to some extent mutually interdependent.

We speak of *joint supply* when the production of one commodity involves the production of one or more other commodities inseparably connected with it. The price yielded by such commodities together must cover the *joint* cost of their production, the portion of the total price which each bears being dependent upon its marginal utility.

Supply is said to be *composite* when it is produced from several rival sources giving scope for the operation of the principle of substitution.

When the same factor of production can be used to produce more than one class of goods, though not simultaneously, *supply* is said to be *alternate*.

Monopoly is the opposite of competition. The whole supply is controlled by one producer who can fix what price he likes, instead of having to accept the price as determined by competition among a number of rival producers. But while the monopolist can fix the price he cannot at the same time dictate the amount to be sold at that price, because this latter depends on demand. The essence of the matter may be expressed by saying that the monopolist can dictate *either* the price or the output but *not both*. He will consider

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various prices and the various quantities which his knowledge of demand tells him he is likely to sell at these several prices, and he will choose that arrangement which will yield him the highest net income or the highest *net monopoly revenue*, as it is called.

If the demand is inelastic and the commodity is subject to the Law of Diminishing Returns, the monopolist is likely to favour a high price and restricted sales. If demand is elastic and the Law of Increasing Returns is in operation, large sales at a low price will probably be most advantageous to him.

Thus it is not true that even if the monopolist pursues nothing but his own interest, prices are bound to be high. On the contrary, it may happen that monopoly prices are actually lower than competition prices, because under monopoly there may be a considerable saving in the cost of production, and the monopolist may after careful calculation come to the conclusion that his profits are likely to be highest if he fixes the price as near the cost of production as possible, enabling the market to take a very large quantity. Apart from this purely selfish consideration, the natural impulse of the monopolist to pitch the price very high is subject to the following restraining influences: (i) Possibility of substitution, (ii) Fear of combined action on the part of consumers, (iii) Fear of Government interference, (iv) Fear of competitive producers appearing on the scene, and (v) Solicitude for public welfare.

The prejudice against monopoly, however, is not altogether baseless. The monopolist will often exact an oppressively high price because it may actually be most profitable to him or because he thinks (it may be quite mistakenly) that it is most profitable. He may also make himself unpopular by charging different prices to different people or different areas. Other possible evils of monopoly are that in the absence of the spur of competition there will be no inducement to introduce improvements, and monopolies may constitute a grave menace to the State and may lead to political corruption.

Monopolies may be classified as (i) Natural monopolies, (ii) Social monopolies, (iii) Legal monopolies, and (iv) Voluntary monopolies.

Competition among sellers is often imperfect. Under perfect competition, each producer must take the prevailing market price as something unalterable and production is so regulated that the average cost and the marginal cost of the optimum firm both equal the market price. Under imperfect competition this will not hold good. Production will stop before price falls to the level of marginal cost. It will not be profitable to increase the scale of production so that firms reach the optimum size. Prices will be higher, goods less plentiful and there may be discrimination so that some consumers are charged higher prices than others.

EXCHANGE: MONEY

§1. **Difficulties of barter.**—A money economy is found to exist in every civilized society. The peculiar disadvantages of barter (that is, direct exchange of goods against goods) which is a possible alternative to money economy, may be briefly summarized as follows:¹ Exchange by barter cannot occur without the double coincidence of wants and possessions. What I want the other man must possess, and he must want what I possess. Even when there is this double coincidence there would be difficulty in deciding how much of one thing ought to be exchanged for how much of the other, and endless higgling would be the result. This difficulty is obviated if we have a common measure of value. In barter is the further difficulty of 'accommodating units of sale to units of purchase'. Suppose I have a field and wish to offer it in exchange for numerous articles which I am in need of. How can I cut up the field into convenient lots to offer them in return for every one of these articles?

§2. **Definition of money.**—The term 'money' is used in different senses in different connexions. But a careful inquiry as to the meaning of the term will serve to clear our ideas on the subject. Walker's famous statement, 'Money is what money does', on the analogy of the well-known proverb, 'Handsome is that handsome does', merely leads us further to inquire 'What is it that money does? What are its functions?' Its principal functions are that it acts (i) as a medium of exchange, and (ii) as a standard of value. If, as Walker says, whatever performs the functions of money is to be included under the term money, it would appear as if coins, government notes, bank notes, cheques, bills of exchange and even first-class securities must be regarded as money. But a little thought will show that these different instruments do not all perform the functions of money equally well. *In order to be a good medium of exchange it is necessary that the money used should be accepted freely in final discharge of liability or debt throughout a community.* From this point of view there is considerable difference between the instruments broadly grouped as money. For instance, rupees in this country pass from hand

¹ See also ch. ix, §4.

to hand with complete freedom. So do Government Currency Notes. But the notes will circulate freely only so long as people continue to believe that they are convertible without question on demand into rupees. Cheques, on the other hand, circulate only amongst those who are assured of the credit of the drawer (assured that they will be cashed by the bank on which they are drawn). Bills of Exchange, *hundis*, etc., have a still more limited circulation. But there does not seem to be any logical reason why all these media of exchange should not be called money in so far as they do perform the functions of money. As we shall see later on, the volume of money has an important bearing on the level of prices. In establishing this proposition we shall find that under the term money we have to include not only standard coins and other legal tender,¹ but also to some extent cheques and other forms of 'fiduciary' or 'representative money'.² What exactly is to be understood by 'money' in a particular connexion will generally be clear from the context. But the more important thing is to understand thoroughly the nature of the work which money is expected to do. Let us therefore give a fuller statement of the functions of money.³

§3. **Functions of money.**—The functions of money fall into two classes: (i) the fundamental or primary functions, and (ii) the secondary or derived functions (derived from the fundamental ones).

(i) The fundamental functions of money are that it acts as (a) a medium of exchange; (b) a measure of value.

(ii) The derived functions of money are that it serves as (c) a store of value; (d) a standard of deferred payments; (e) a reserve for bank credit.

We shall now explain each of these briefly:

(a) *Money acts as a medium of exchange.*—It is a means of transferring, from one party to another, command

¹ This term is explained in §11.

² Fiduciary (from Latin *fiducia*, trust, reliance) means drawing its value from the confidence of the public. Representative means representing or acting as a substitute for the standard of value.

³ The terms 'money' and 'currency' may in this connexion be distinguished. The term 'money' is very wide in its scope, since it includes anything that serves as a medium of exchange. The term 'currency', on the other hand, is narrower in its scope, and it usually signifies those media of exchange which are commonly current by reason of the authority of the State behind them, i.e. those that are legal tender. Thus while the rupee or rupee notes are currency, a cheque or a bill of exchange cannot be regarded as currency, although it may, to some extent, function as money.

over commodities in general (purchasing power), thus facilitating exchanges among the members of a society and enabling division of labour to work out its results smoothly.

(b) *Money functions as a common measure of value.*—

Just as we measure the length of a piece of cloth by means of a yard-stick, so we measure the value of utilities by the measuring rod of money. By stating the prices of different utilities (i.e. by stating their values in terms of a common standard, money), it is clear that we facilitate the exchange of one utility against another.

(c) *Money serves as a store of value.*—Money should be capable of performing this function satisfactorily. It should not deteriorate in value by being stored. We may want to store our money because we wish to enjoy it at leisure, or because we simply wish to save it. This function is becoming less and less important owing to the substitution of deposit banking for hoarding, and owing to the growth of the investment habit.

(d) *Money acts as a standard of deferred payments.*—

Contracts about future deliveries or payments would work out inequitably, if the money in terms of which they are made fluctuated in value. It is therefore important that our money should be reasonably steady in value.

(e) *Money serves as a reserve or basis for credit operations.*—A proper cash reserve ensures solvency and enables us to use cheaper media of exchange, such as bank notes and cheques.

§4. **Precious metals as money.**—A gradual process of evolution has led to the general acceptance of the precious metals as the chief form of money, because they possess the following qualities usually regarded as necessary: (i) Portability; (ii) Durability; (iii) Intrinsic value (gold and silver are valued for their own sake); (iv) Homogeneity (so that value is in exact proportion to weight); (v) Divisibility (gold and silver can be divided and joined together again with ease. Contrast with them such a thing as a diamond which cannot be divided without losing its value); (vi) Malleability (the metal should be capable of being easily hammered into any form and receiving any kind of stamp guaranteeing its quality and value); (vii) Cognizability (no inferior metal can be passed off as gold or silver, because they are so easily recognized); (viii) Stability of value (gold and silver—particularly gold—are relatively stable in value, because, owing to their great durability, the stocks of the world supply of gold and silver have gone on steadily increasing ever since man began to dig them out of

the earth. The total stocks at present in existence are therefore so huge that any year-to-year fluctuations in the quantity mined have very little immediate influence on the value of the whole. The value of other commodities like wheat depends largely on the quantity produced in any given year. Nevertheless it must be admitted that in respect of stability of value even gold has been found to be more unstable than is to be desired. How to devise a monetary system that will give the world relief from violent changes of prices is one of the most urgent and one of the most difficult of economic problems.)

§5. Standard coins.—The standard or the principal coin is the chosen coin adopted as the unit in the monetary system, being a certain weight of gold or silver of a certain standard of fineness. Thus, when the Gold Standard was functioning in Great Britain, before 20 September 1931, the gold sovereign weighing 123·27 grains $\frac{1}{2}$ fine (or 113·01 grains troy of pure gold) was the standard unit of value, all other values or prices being reckoned in terms of it. A standard coin has the following characteristics : (i) Its value as metal is the same as its value as coin. For example, the gold sovereign in England before 1914 was officially equal to twenty shillings. If it was melted, one could always get twenty shillings in currency in exchange for it. (ii) The standard coin is also unlimited legal tender, i.e. it can be used in final discharge of any liability. (iii) Usually again the mints are open to free coinage of the standard coin. (iv) Lastly, to the value of the standard coin (money) are referred the values of money of other kinds for determination.

§6. Token coins.—Token coins are so called because they are *tokens* of value, having an official purchasing power which they do not intrinsically possess. They are made of a different metal (e.g. nickel or bronze) from the standard coin and are dependent on the latter for their nominal purchasing power. They are intended to serve as subsidiary money for making small payments, or making up odd amounts involved in large transactions. Token coins offer a contrast to standard coins in all respects and possess the following characteristics : (i) Their intrinsic value is less than their value as metal. If, for instance, twenty silver shillings are melted, the metal so obtained cannot be sold for £1 or twenty shilling pieces or anything equal in value to that. (ii) Token coins are limited legal tender. In England the silver shilling, which is a token coin, is legal tender only up to forty shillings or £2. If in England you owe somebody £5 and take a hundred shilling pieces to your creditor, he is entitled to refuse to accept payment in this form. (iii) There is no free coinage of token mon-

ey. The public cannot take ingots of metal to the mints and have it turned into token coins. How many token coins are manufactured and put into circulation depends entirely on the discretion of the currency authority.

If the token coin (as metal) is really not worth as much as fixed by the currency authority, how is it accepted by the public at the official valuation? The answer is that by *limiting its supply* the currency authority can maintain the official value. Token coins have utility because without their use the smaller transactions could not easily be carried on. They possess utility and the Government sees to it that they are supplied in limited quantities. We have already seen that in order that anything should possess value, it must be useful and scarce. If through an error of judgement or for the purpose of making profit out of the coinage, the Government issues an excess of token coins, they will lose the artificial value with which they have been endowed. This is known as the principle of limitation.¹

The rupee in India is a mixture of token and standard coin. It is like a standard coin in that it is unlimited legal tender. It is like a token coin in that (i) its official value of 1s. 6d. sterling is very much more than the market value of the 90 grains² of pure silver which it contains and further in that (ii) it is not freely minted.

Paper money may also be regarded as token money, its intrinsic value being almost nil. The difference between silver or bronze token coins and paper money is often one of degree only. The shilling or the rupee is after all a note printed on silver (a more expensive material than paper).

COINAGE PROBLEMS

§7. The use of coins.—The precious metals are used as money in the form of coins today, and the inferior metals like copper, bronze and nickel for subsidiary or token coins. When precious metals were first used in the shape of rough ingots or cut ingots it was not possible to use them as currency 'by tale' (i.e. by counting the number of money pieces), because they were

¹ It is often stated that their character as limited legal tender also helps token coins to maintain their value. However, the fact that they are not unlimited legal tender is a disadvantage and by itself ought to diminish their value rather than increase it.

² Until recently the Indian rupee contained 165 grains of pure silver and 15 grains of alloy (i.e. $\frac{1}{3}$ fine). But as a means of saving silver during the present war, the standard of fineness of the rupee was lowered to $\frac{1}{2}$, i.e. 90 grains of pure silver and 90 grains of alloy.

not guaranteed to be uniform in weight and value. They had to be weighed and assessed every time they were offered as money. This naturally caused considerable inconvenience. Eventually they were given a definite form as coins, usually disc-shaped. Coins may be defined as stamped and certified pieces of metal of which the weight and fineness are guaranteed by the Government, and certified by the integrity of designs impressed on the surface of the metal. The above description applies to what are called 'standard coins'. Token coins are also stamped, but their weight and fineness are not guaranteed. In fact, it is understood that their intrinsic value is smaller than is artificially given to them by the Government.

Owing to the increasing use of convertible and inconvertible paper money,¹ the use of standard coins in the principal currency systems of the world today is extremely limited. The coins in circulation nowadays are mainly token coins.

§8. Free coinage and gratuitous coinage.—The conversion of metal into coins is now everywhere a function of the State, which undertakes it mainly for ensuring public convenience by maintaining uniformity of coins. Incidentally the profit from coinage goes into the public treasury. For this purpose every Government maintains one or more mints (e.g. India has mints at Bombay and Calcutta).

Free coinage in its technical sense refers to the right of any holder of bullion to have it converted into standard coins at a fixed rate and without any limit of amount. For example, mints in India were open to the free coinage of silver into rupees from 1835-93. In 1893 the mints were closed to the coinage of silver except on Government account.²

Gratuitous coinage (which should be carefully distinguished from *free coinage*) means that the State levies no charge for conversion of bullion into coins at the mint. For example, until the passage of the Gold Standard Act of 1925, in Great Britain gold bullion was converted into sovereigns for the public without any charge, the expenses being borne by the Government.

As already observed, the right of free coinage is recognized only in relation to the standard coins of a country; as to token coins, they are issued solely at the discretion of the State. It may be added here that the free coinage of standard coins without limit of amount, and the freedom to melt them, serve to maintain the identity of the legal (or the face) value and the intrinsic (or bullion) value of such coins.

§9. Mint price of gold.—The rate at which standard coin is

¹ See §21

² See *Elements of Indian Economics*, ch. vi

given for bullion at the mint is called the mint price of the standard metal. For instance, the mint price of gold in Great Britain was £3-17-10½ per standard ounce of gold (i.e. ½ fine). This weight (480 grains) of gold could be converted into £3-17-10½. This corresponds to a price of £4-4-11½ per ounce of fine or pure gold. The sovereign accordingly contains 123-27447 grains of standard gold, or 113-0016 of pure or fine gold. Under the Gold Standard Act of 1925, which established the Gold Bullion Standard in Britain, only the Bank of England was entitled to get sovereigns issued in lieu of gold bullion. A private person could, however, obtain currency at the rate of £3-17-9 per standard ounce of gold from the Bank of England.¹ The difference of 1½d. between the mint price of gold and the bank's buying price represented the expenses of assaying and the loss of interest during the period of waiting, pending conversion of bullion into coinage.

§10. Debasement.—Debasement is an alteration in the standard unit of value, or standard coin, effected either by clipping or 'sweating' (i.e. by reducing the quantity of the metal by a chemical process) resulting in a diminution of weight of the metal; or by lowering the standard of fineness by mixing more alloy with it. Debasement of coins was freely practised by Governments in olden days, e.g. by Henry VIII in England. But today most Governments consider it to be a point of honour not to tamper with their standard money. The case of token money is, however, different, and as a matter of fact the standard of fineness of the English shilling was reduced from $\frac{25}{16}$ to $\frac{1}{2}$ in 1920, so that people should not be tempted to melt their shillings, as had happened during the war owing to a temporary rise in the price of silver. If people melt on a large scale in this fashion a shortage of token coins would occur, causing inconvenience to trade.

§11. Legal tender.—Money certified by law to be valid for final discharge of debts of *any* amount is called (unlimited) legal tender money. Standard money is usually full or unlimited legal tender. Token money, on the other hand, is limited legal tender. For example, the sovereign is full legal tender, but the shilling is legal tender only for forty shillings at a time. The rupee and the half-rupee—though tokens—are unlimited legal tender, but the nickel coins are legal tender up to one rupee only. If a man owes me Rs. 500 and offers payment in the form of rupee coins or currency notes, I must accept the payment. If, however, he wishes me to accept payment in the form of $500 \times 8 = 4,000$ two-anna nickel coins, I have a right

¹ See §14 (ii).

to refuse payment in this form, because the rupee and rupee notes alone are legal tender for any amount. Money that is not legal tender at all is called 'optional' money (e.g. the gold mohurs in India between 1835 and 1893 were optional money). So also bank money (cheques, etc.) is optional money.

§12. Gresham's Law.—Gresham's Law, so called after Sir Thomas Gresham, the monetary adviser of Queen Elizabeth, states that if good and bad (or weak) money are circulating together, the bad money will eventually drive out the good from circulation. If one has the choice of paying by means of sound full-weighted coins or the coins that are defaced or light, one will naturally prefer to part with the latter. This assumes that no difficulty is being experienced in getting people to accept payment in the bad money (which though bad is legal tender just as much as the good money). Under these circumstances, the good coins will be withdrawn from circulation, because people will prefer to use them in arts, for ornaments, for hoarding and for export. In these uses the value of coins is simply the value of their metallic content. The value of good coins as metal is greater than that of bad coins. But as *money* both have precisely the same value.

Gresham's Law also applies to other cases.

(i) *Bimetallism* (the system under which coins of gold and silver circulate together).—Alterations in the market ratio of the values of the two metals in relation to a fixed legal or mint ratio result in the displacement of gold money by silver money or vice versa, according as silver or gold money respectively is for the time being the weaker of the two moneys.¹

(ii) *A depreciating paper money circulating side by side with metallic money.*—If there is an overissue of paper money, so that it is totally or partially inconvertible, it becomes bad money relatively to metallic money and therefore drives out the latter from circulation.²

Exceptions.—Gresham's Law, however, acts subject to certain limitations:

(i) Under the influence of habit, bad money and good money may continue to circulate side by side for a long time, before a sufficiently large number of people become aware of the difference in the value and alive to the advantages of withdrawing the better money from circulation for other more profitable uses.

(ii) If the total currency is sufficiently limited, people may find that bad and good coins or money are *both* necessary for purposes of trade.

¹ See also §18

² See §23.

(iii) The bad coins or inconvertible paper money, as the case may be, may have reached such a stage of badness or depreciation, that people will lose faith in them and will simply not accept them whatever the Government may have to say about the matter. Here the reverse of Gresham's Law will hold good because good money (which alone will be accepted) will drive out bad money (which nobody will accept).

MONETARY SYSTEMS

§13. **Monetary standards.**—(i) *Monometallism or the Single Standard.*—Under this system, one metal alone—generally either gold or silver—is freely coined and is full legal tender; while for the sake of making small payments baser metals are coined into token-coins at the discretion of the Government and made legal tender to a limited extent. This monetary system is also called the Composite Legal Tender System. According as the freely coined (or the standard) metal which is selected as the standard unit of value is gold or silver, we have (a) Gold Monometallism or the Gold Standard or (b) Silver Monometallism or the Silver Standard. India (as China until recently) was under silver monometallism between 1835 and 1893.

(ii) *Bimetallism or the Double Standard.*—This is also called the Multiple Legal Tender System. The essence of bimetallism is, first, that both gold and silver are used as standard money or standard units of value; secondly, that both are unlimited legal tender; thirdly, that both are given the privilege of free coinage; and fourthly, that there is generally a fixed legal (or mint) ratio between the value of the two metals at which it is intended that they should circulate. Thus both gold and silver are accorded equal monetary status under bimetallism.

(iii) *Paper Standard, or Managed Currency Standard.*—The third principal monetary system is the Paper or the Managed Currency Standard. Under this system the currency consists of paper and the currency authority does not bind itself to convert it into gold.¹

§14. **The Gold Standard.**—The Gold Standard was in operation (until recently) in most of the advanced countries of the world, so that the resulting system could be described as an International Gold Standard. It was first adopted by Great Britain in 1816, and her example was widely followed during the last thirty years of the nineteenth century when bimetallism came to be discarded by Germany, France, the U.S.A., the Scandinavian countries and others. The Gold Standard thus

¹ See §§20-24.

became the world's most approved monetary system and held this pre-eminent position until the outbreak of war in 1914.

The Gold Standard is so called because under it gold is the measure of values of goods and services, and all debts in the last resort are payable in gold. A country is said to be on the Gold Standard when it maintains its monetary unit (the pound sterling in the United Kingdom, the franc in France or the dollar in the U.S.A.) at a value equal to that of a definite weight of gold of a certain fineness.

(i) *Gold Currency Standard*.—Before the war of 1914-18 this equivalence was generally secured by the adoption of that form of the Gold Standard which is known as the Gold Currency Standard. Under this form gold coins of a certain prescribed weight and fineness (e.g. the British gold sovereign weighing 123.27 grains $\frac{1}{2}$ fine) were actually used as currency. Paper money (e.g. the Bank of England notes in England) was made convertible into gold coins on demand. At the same time free coinage of gold, free melting of gold coins and free export and import of gold were allowed. The currency unit was thus maintained at a fixed gold parity, and gold tended to have the same value all over the Gold Standard area.

Until recently, the form of the Gold Standard, or gold monometallism, generally prevalent, was that of the Gold Currency Standard described above. The force of necessity during 1914-18 as well as advance in economic thought have now made people realize that actual gold coins passing from hand to hand are an unnecessary luxury and that we can have all the essentials of a Gold Standard without gold coins.

Two other arrangements, namely the Gold Bullion Standard and the Gold Exchange Standard have thus come to be admitted as genuine forms of the Gold Standard, which are more economical than the Gold Standard of the orthodox type. Of these two, a good deal of suspicion still clings to the Gold Exchange Standard. To most people, the Gold Bullion Standard is much more acceptable as an alternative to the orthodox type than the Gold Exchange Standard.

(ii) *Gold Bullion Standard*.—During the war of 1914-18 gold coins ceased to circulate in most countries, and now the use of actual gold currency in daily life may be looked upon as a phase of the Gold Standard that has passed. When Great Britain returned to the Gold Standard after that war by the Gold Standard Act of 1925, she introduced important modifications and adopted what is now known as the Gold Bullion Standard. The main features of the new standard were as follows : (a) The free coinage of gold on private account was

abandoned, only the Bank of England being allowed to get sovereigns issued against gold. Sovereigns, though not legally, were practically demonetized and ceased to circulate. (b) The Bank of England's notes, now the principal legal tender, ceased to be convertible into gold coins on demand. (c) But the Bank of England as the currency authority was required to maintain the gold parity of the pound sterling (i.e. to maintain the value of the actual currency medium in terms of gold) by : (1) selling gold in the form of bars of pure gold of 400 oz. at the rate of £3-17-10½ per standard ounce (or, what comes to the same thing, at the rate of £4-4-11½ per *fine* ounce). This meant that legal tender currency (bank notes) of the value of about £1,700 had to be presented to the Bank in order to obtain 400 oz. of fine gold bullion. Gold bullion cannot be used as money. Under the old system, gold coins were given in exchange for the notes presented by the public and these naturally passed into circulation. (2) Secondly, the Bank of England was required to buy gold in lieu of legal tender currency (Bank of England notes) at the Bank's buying price of gold (namely, £3-17-9 per standard ounce or £4-4-9¾d. per *fine* ounce). (d) Free import and export of gold were allowed as before.

So long as the currency authority is prepared and able to sell gold or buy gold at a *fixed* rate at the option of the public and in any quantity required, and so long as the free export and import of gold are allowed, that is all that is necessary for an effective gold standard. What is wanted is that the currency should always have the same value in gold, not that gold coins should circulate.

Under the Gold Bullion Standard, while gold is the measure of value, it no longer functions as a medium of exchange. This secures great economy in its internal use. Practically all the gold reserves in the country are held by the Central Bank which keeps currency at a fixed value in relation to gold.

Great Britain's example was followed by other countries like France when they restored the Gold Standard. The Hilton-Young Commission (1925-6) also recommended the Gold Bullion Standard for India.¹

(iii) *Gold Exchange Standard*.—The Gold Exchange Standard was in use before the war of 1914-18 in certain countries like India, the Straits Settlements and the Philippines. After this war there was for some time a tendency towards its adoption by European countries like Germany, Italy and Bel-

¹ See *Elements of Indian Economics*, ch. vi, §3.

gium which could not afford the luxury of a large stock of gold in their reserves.

Under the Gold Exchange Standard, the internal currency consists of cheap tokens of silver or paper. Here also, as under the Gold Standard, the internal currency is maintained at a certain fixed value in terms of gold. This, however, is done not by converting local currency into gold coin or gold bullion but into gold exchange, i.e. bills and drafts on some foreign centre where the gold standard is in effective operation. Thus before the war of 1914-18, the value of the Indian rupee was fixed at 1s. 4d., and, because England was on a gold basis, 1s. 4d. stood for a definite quantity of gold. We could get drafts and bills on London when the Government chose to sell them for maintaining the value of the rupee at the fixed rate, but we could not get actual gold or gold coins. We could always convert gold or gold coins into rupees or notes at the fixed rate, but not rupees and notes back into gold or gold coins as a matter of right. Gold is made available at some foreign centre where, therefore, the gold reserves are located. The reserve maintained in the country itself is in the shape of local currency, because the currency authority does undertake to convert gold into local currency though it does not undertake to do the reverse, namely, to convert local currency into gold.

The Gold Exchange Standard, if properly worked, secures an even greater economy of gold for monetary purposes than is possible under the other forms of Gold Standard. It is, therefore, especially suited to countries that cannot afford to adopt the full-fledged Gold Standard either because of their comparative poverty or backward development. It requires, however, a great deal of control over currency and exchange. The system as generally worked is liable to cause inflation of currency. Under the Gold Currency or Bullion Standard, if there is too much currency, it is presented for conversion into gold and thus there is an automatic check to inflation. Under the Gold Exchange Standard, the currency authority gives gold exchange at its discretion and not on demand. Therefore the check is not automatic. The location of the gold reserves abroad is also attended by certain dangers, such as a lack of confidence in the currency system and the risk of depreciation of the reserves in case the country in which they are held goes off the Gold Standard, as Great Britain did in 1931. On the whole, practical economists are inclined to prefer some form of the Gold Standard.¹

¹ For further particulars, the student is advised to refer to *Elements of Indian Economics*, ch. vi, for a discussion of the Gold Exchange Standard in

§15. The advantages of the Gold Standard.—We shall now consider the advantages of the Gold Standards, especially in the case of the Gold Currency and Bullion Standards.

(i) The Gold Standard is a simpler monetary system than either Bimetallism or the Managed Paper Currency Standard.

(ii) Gold is in universal demand all over the world and is everywhere acceptable. It thus becomes an international monetary standard and ensures the benefit of stability of foreign exchanges, which is beneficial to international trade.

(iii) The Gold Standard makes reckless expansion or depreciation of currency impossible by making an increase in its quantity strictly dependent on larger gold reserves. It also secures automatic contraction with every decrease of the gold reserves.

(iv) The Gold Standard is comparatively a more stable standard than any so far tried. The accumulated stock of gold being very large, variations in its annual output do not produce corresponding changes in its value, their influence during short periods being small. It is also claimed that during normal times the supply of gold has kept pace with the demand for it and that fears about its shortage are groundless.

(v) Finally, until recently at any rate, the Gold Standard enjoyed the confidence of the world and every civilized country tried to adopt it.

§16. Drawbacks of the Gold Standard.—(i) It has been argued, on the other hand, that over long periods gold does not possess stability of value in terms of goods and services. Changes in its output do ultimately affect prices, causing them sometimes to rise (e.g. during the period 1895-1914) and sometimes to fall (as after 1929). The Gold Standard is thus found to be an unstable monetary standard. Some present-day economists apprehend a shortage of gold having regard to the needs of our progressive civilization. According to Gustav Cassel, the rate of our economic progress is 3 per cent per annum while the rate of increase of gold is only 2 per cent.¹ It is mainly on these grounds that certain economists like Keynes advocate a Controlled or Managed Currency Standard to ensure the internal stability of prices, which in their view is even more important than the external value of a country's currency unit.

India. The history of the Indian experiment will serve to throw further light on the uses as well as the difficulties of the Gold Exchange Standard. The present monetary standard in India may be described as the sterling exchange standard, the rupee having been linked to sterling at 1s. 6d. since 21 September 1931, when England went off the Gold Standard.

¹ G. Cassel, *The Crisis in the World's Monetary System*, p. 17.

(ii) The Gold Standard makes the expansion of currency much too difficult by making it dependent on the blind force of nature governing the output of gold.

(iii) The breakdown of the Gold Standard during the war of 1914-18 and once again since September 1931, as also the maldistribution of gold in the post-war years, are quoted as evidence of the weakness of the Gold Standard. The advocates of the Gold Standard point out in defence that the 'rules of the Gold Standard game' were not observed (e.g. free movement of gold was not permitted and the gold that was imported was sterilized, i.e. was neither allowed to influence the price level and the course of foreign trade nor lent abroad). It is also argued that the 1914-18 war upset the sensitive organization of the Gold Standard. Further, the war debts, reparation payments and lack of confidence in paper currencies have brought about the maldistribution of gold (nearly two-thirds of the world's supply of monetary gold being cornered by the U.S.A. and France, leaving only one-third for all other countries together).

§17. Future of the Gold Standard.—The future of the Gold Standard remains today very uncertain.¹ An attempt was made to ensure an international agreement on the question of the restoration of the Gold Standard at the World Economic and Monetary Conference held in London in June-July 1933; but it proved a failure. Nevertheless, from 1933 to the outbreak of war in 1939, influential opinion was strongly in favour of the ultimate restoration of the Gold Standard when conditions are more propitious than at present. It is hoped that the Gold Standard of the future will be of a better and more economical type than the orthodox standard. Gold in international circulation will certainly be dispensed with. The gold reserve need not exceed, say, 25% of the note issue, instead of the much larger reserves varying from 33% to 50% or even 60% actually held today. The Central Banks of the world might co-operate more actively in regulating the international movements of gold and the volume of credit so as to ensure a stable price level. Weighing all the elements of the situation it would seem that ultimately some form of Gold Standard will have to be adopted, since the world as a whole is not yet ready to work a system of an inconvertible paper standard on a permanent basis. Gold still has a powerful hold even on the most highly civilized nations of the world, some of which have in fact taken to gold hoarding. It is likely, however, that lower and more elastic gold parities for the various currency units will have to

¹ See T. E. Gregory, *The Future of the Gold Standard*.

be adopted¹ in order to lessen the amount of reserve gold required as cover for notes, and to maintain a more remunerative price level for goods and services than prevails today. Gold will retain its importance as an international precious substance. The currency that is likely to be particularly sought after after the present war is dollars, and gold will be the only sure means of acquiring dollars.

§18. Bimetallism: a brief review of its working and difficulties.—Till the last quarter of the nineteenth century, for about 200 years, Bimetallism was the leading monetary system of the western world (except in the United Kingdom which adopted the single standard of gold in 1816), and had worked reasonably well. During this long period the market ratio of silver and gold was fairly stable at about $15\frac{1}{2} : 1$. But on account of the discovery of gold mines in Australia and California in 1850, gold fell in terms of silver and the ratio was $15 : 1$. Under the legal ratio of $15\frac{1}{2} : 1$ in France, gold came to be overvalued or weak money (i.e. the legal value was higher than the market value of gold coins), and silver became undervalued or strong money (i.e. its legal value was below the market value of silver coins). Gresham's Law thus came into operation and the weak gold money displaced the strong silver money. In 1865 therefore France and other countries of the so-called Latin Union² stopped the flight of their silver coins by reducing their standard of fineness except in the case of the 5-franc silver piece.

The tables were turned against silver when, commencing from 1871, there set in a great adverse change in its monetary status. The price of the white metal declined steadily from about 60*d.* per ounce in 1871 to 26*d.* per ounce towards the end of the century. While there was a great increase in the supply of silver—which was mined in large quantities in America—the demand declined because important nations like Germany, the Scandinavian group and the U.S.A. demonetized silver, i.e. discarded it for monetary purposes, and adopted the Gold Standard, so that they now required silver only as token money. The market ratio underwent violent changes, being $20 : 1$ in 1871 and $38 : 1$ at the end of the century. The countries of the Latin Union were flooded with cheap silver, which was presented for coinage at the mints. This cheap silver drove out gold coins. The Latin Union countries, becoming

¹ e.g. Great Britain may find it necessary to revise the gold value of the pound sterling and fix it, say, at 80 grains instead of 113 grains of pure gold.

² This Union was formed in the year 1865 by France, Belgium, Switzerland, Italy and Greece for taking concerted action in defence of Bimetallism.

alarmed at the prospect of losing all their gold, decided to save the situation by closing their mints (1874) to the free coinage of silver which had made the displacement of gold coins possible. The standard thus adopted came to be known as the *Limping Standard* and remained in force throughout the pre-(1914-18)-war period. Under this standard, though free coinage of silver was suspended, both gold and silver remained legal tender with a fixed legal ratio between them. Silver coins could be redeemed in gold and were maintained in circulation along with gold coins. Silver thus limped or 'hobbled along' with its stronger companion gold. Hence the name *Limping Standard*.

The foregoing survey brings out the principal defect of Bimetalism, namely the periodic disturbance caused by changes in the market ratio. In practice it worked out as an alternating standard of gold or silver, because now silver now gold went out of circulation.

§19. International Bimetalism.—The advocates of Bimetalism in France and the U.S.A.¹ did not admit the defects mentioned in the preceding section so readily, and argued that if all the important nations of the world adopted bimetalism at an agreed ratio, not only would the market ratio remain stable but there would be other advantages also. The joint standard of gold and silver would be more stable than the Gold Standard alone, since any deficiency of gold could be remedied by using silver. This would keep prices stable. It would also secure a reasonable stability of foreign exchanges which is so important to international trade. There was considerable agitation in favour of international Bimetalism in the last quarter of the nineteenth century, and at one time even the Government of India favoured it as it was expected to assist in arresting the fall in the gold exchange value of the rupee.² The question was considered at several International Monetary Conferences, but nothing came of it. The fresh discoveries of gold after 1895 set at rest the apprehension regarding the shortage of gold. England and Germany were from the outset not keen on Bimetalism because it would have meant sacrificing their Gold Standard, which they regarded as a great blessing. The co-operation of bankers is indispensable for the successful working of any currency system, and somehow the banking world had no faith in silver.

¹ The U.S. Government's policy was greatly influenced by powerful business men who were interested in silver mining. They naturally desired to see silver restored to its old status as one of the standard metals, so that the fall in its price might be checked. ² See *Elements of Indian Economics*, ch. vi, §1.

In the period between the wars (1919-39), there was a partial revival of the agitation in favour of Bimetallism and the remonetization of silver as a corrective to the alleged shortage of gold and as helpful in increasing the supply of currency, so as to bring about the rise in prices desired during the economic depression which set in after 1929. But except in the U.S.A. (where President Roosevelt under pressure from the Silver Party in the Congress adopted a silver-buying policy), monetary opinion does not favour the proposal to revive Bimetallism.

PAPER MONEY

§20. Paper money: its advantages and limitations.—It now remains to consider the third principal monetary system, namely the inconvertible or Managed Paper Currency Standard.

In many advanced countries of the world, paper money constitutes an important part of the circulating medium. In India, for example, besides the metallic coins (of silver, nickel and bronze) we have currency notes issued by the Government. In most countries today paper money is issued by the great Central Banks of Issue such as the Bank of England. In India also, by an Act passed in April 1934, the Reserve Bank of India (established in April 1935), instead of the Government, is empowered to issue notes.¹

The advantages of paper money are obvious. It is convenient to handle, readily portable, and it is, of course, very economical. It can be issued in any convenient denomination, small or large. It may also be said to be homogeneous. *Prima facie* its value can be kept more stable by conscious regulation of its quantity than that of metallic money, whose supply is dependent on the blind forces of nature. The greatest danger of paper money, however, is the temptation to overissue it until it becomes inconvertible and at times absolutely worthless—as was the case with mark notes, before the German currency was stabilized in 1924. Paper money, even when it is otherwise satisfactory, is, of course, recognized only in the particular country which issues it. Unlike gold money, it is not accepted all over the world. This and other difficulties can theoretically be removed by the issue of an International Paper Money. But the present lack of co-operation among nations even in much less difficult matters than this makes concerted international action in this sphere most improbable. At present what is more feasible and essential is a careful regulation of the issue of paper money in each country.

¹ See *Elements of Indian Economics*, ch. vi, §21.

§21. **Forms of paper money.**—In the first place, we may point out that commercial paper (cheques, bank drafts and bills of exchange)¹ is usually distinguished from the three forms of paper money described below, which readily pass from hand to hand. Commercial paper on the other hand, has restricted circulation, depending as it does on the credit, standing and mutual knowledge of the parties concerned. In the United States and United Kingdom commercial paper, or bank money as it is sometimes called, is used to a very large extent as a means of payment or medium of exchange. The term 'paper money' as ordinarily understood, however, does not include commercial paper.

The following are the three principal kinds of paper money :

(i) *Representative paper money.*—The United States' Silver and Gold Dollar Certificates are examples of representative paper money. They are merely bullion certificates and, like warehouse receipts for goods, stand for metal, coined or uncoined, deposited with the United States Treasury. The certificates are, of course, more easy to carry about than the metal itself. Strictly speaking they are not paper money at all. The real problems of paper money arise only when it is not fully backed by metal.

(ii) *Fiduciary or credit paper money.*—Here the issuing authority (bank or other) promises to pay a specified sum of metallic money or gold bullion on demand or presentation of the notes. They readily pass from hand to hand and are accepted because the public has faith in the issuing bank or authority. Usually they are unlimited legal tender. The notes issued by the Bank of England are unlimited legal tender, even though since September 1931 they have ceased to be convertible.

(iii) *Fiat or inconvertible paper money.*—Although in outward form fiat or inconvertible paper money may be a promise to pay a certain sum of metallic money, it is generally understood or known that the issuing authority has not the intention or the ability to keep the promise. This often happens in time of war or some other grave political unsettlement. The French *assignats* issued during the French Revolution, the American 'greenbacks' issued during the Civil War, the German mark, the French franc and the British Treasury Notes issued during the war of 1914-18, are all instances in point. They show how under the stress of some kind of crisis, fiduciary or convertible bank notes may degenerate into in-

¹ See ch. xi, §3.

convertible paper money by State fiat or law, authorizing the bank of issue to suspend gold payments for its notes. This may be done in order to enable the bank to extend loans to a needy Government, either for war expenses or to meet any difficulty it may have in finding the necessary gold for converting the notes.

§22. Evils of a depreciated or inconvertible paper money.—

A paper currency generally depreciates if it ceases to be convertible, unless its quantity is strictly regulated. Currency which has depreciated is a bad standard of value and a bad medium of exchange. If, for example, £10 notes cannot be changed into as many as ten sovereigns and are issued in excess, they become less valuable than coins. Besides this depreciation of notes in relation to gold, there is also a general depreciation of paper money in terms of commodities and services. That is, prices rise. Those with fixed incomes suffer because their incomes lose in purchasing power. Creditors are defrauded for the same reason. The money they receive in settlement of debts has not the same command over things which it had when the debts were contracted. Business becomes uncertain and speculative with fluctuations in the value of money. The mercantile classes and employers of labour gain at the cost of wage-earners, because wages generally lag behind prices. Exports are temporarily encouraged because a higher price in the depreciated domestic paper money is received for goods sold abroad. Imports are restricted since a higher price in such paper must be paid to buy goods abroad. The sudden increase in paper incomes leads to public and private extravagance and to the ultimate collapse of credit, national and international. All these evils of inconvertible paper were experienced in an acute form by Germany, Austria and Russia during and after the war of 1914-18.

§23. Signs of overissue of paper money.—There are several signs of the excessive issue of paper money, which should cause the issuing authority to reflect, to cry halt and, if possible, to retrace its steps in order to restore the normal monetary circulation.

(i) *Premium on gold.*—As a result of the depreciation of paper money in terms of gold, gold sells at a premium. This premium on gold is measured by the difference between the fixed mint price of gold (which is expressed in terms of gold coins) and the higher market price of gold in the market. Gold is displaced in circulation by paper money and becomes merely a commodity, subject to variation in price in terms of paper money, like any other commodity.

(ii) *A rise in the rate of exchange.*—There is a rise in the paper price of export bills payable abroad in gold.¹

(iii) *Flight of metallic money.*—Paper money, when issued in excessive quantities, tends to displace metallic money according to Gresham's Law and the circulation comes to consist mainly of paper currency.

(iv) *Rise in prices.*—This is the inevitable result of inflation of paper money. According to the Quantity Theory of Money,² when the quantity of money increases faster than the demand for money (i.e. the volume of trade), prices in general rise (the value of money, or its purchasing power, falls). This is the main explanation of the sharp rise in prices during and after the last war in many of the belligerent countries, which were compelled to issue large quantities of paper money to meet their war expenditure.

(v) *Double set of prices.*—There are two sets of prices for the same things, lower prices in gold and higher prices in paper.

Thus the probability of overissue, with all its disturbing consequences, is the main objection to inconvertible paper money. Moreover, experience shows that any attempt to correct the evils of depreciation and inflation by a return to specie payments is difficult and painful because it involves a sudden curtailment of currency, a fall in prices, a setback to exports, etc. The value of precious metals, while, of course, not immune from changes, is founded on the bed-rock of their scarcity, natural qualities and the non-monetary demand for them. Therein lies the superiority of a standard based on them.

§24. Future of paper money.—Owing to the suspension of the Gold Standard in Great Britain and several other countries since September 1931, an inconvertible Paper Standard has been in operation in these countries. So far as Great Britain is concerned, the confidence of the British people in the Bank of England and the monetary policy of the Government, which aims at avoiding overissue of paper currency, has made the present system workable. This success of the British monetary policy has made the prospects of a Managed Currency Standard brighter, at any rate in advanced countries. Less advanced countries like India will probably not be able to dispense with a metallic standard so readily. It is doubtful whether even the progressive countries of the west will be prepared to dispense permanently with gold. In fact there are signs that gold will again come into its own after the present war.³ The desire for restoration of the gold standard

¹ See ch. xii, §17.

² See §29.

³ See §17 above.

is likely to be strengthened in case inflation occurs on any large scale as it is apt to do during war time in spite of efforts to prevent it.¹

§25. Value of money.—We said above that one of the things we expect from good money is that it should be a stable standard of value, just as the yard-stick—our measure of length—should not be elastic. The value of whatever is chosen to function as money should not fluctuate in a disturbing manner. By 'value of money' we mean the quantity of goods and services it will buy. If with the same amount of money we are able to buy more of things in general—in other words, if prices fall—this means that the value of money has risen. Similarly, if with a given amount of money we can buy less, that is if prices rise, the value of money has fallen (Rise of prices=Fall in value of money; Fall of prices=Rise in value of money).

§26. The mechanism of Index Numbers.—In order to get an indication of the direction and the extent of price movements, the device of index numbers is used. We first fix a certain date or period with reference to which as a base we wish to compare prices at other dates or periods. We select a number of articles in general use, put down the price for each of the articles at the basic date, and express each of these prices by the number 100. At other dates we take the prices (of the same articles) then prevailing and express them as percentages so as to show the proportionate change as compared with the basic year. The following table will make the idea clear :

PRICE CHANGES OF CERTAIN COMMODITIES² (1913-20)

(The figures in brackets show the percentage change)

| Year | Rice Price per maund in Rs as ps | Wheat Price per maund in Rs as ps | Jowar Price per maund in Rs as ps | Salt Price per maund in Rs as ps | Cotton cloth Price per piece in Rs as ps | Average Index Number of prices |
|------|---|--|--|---|--|---|
| 1913 | 5 3 0 (100) | 3 11 6 (100) | 3 0 0 (100) | 0 8 7½ (100) | 5 4 0 (100) | 100 |
| 1915 | 6 0 0 (116) | 5 6 0 (144) | 3 4 0 (108) | 1 4 0 (233) | 4 2 0 (79) | 132 |
| 1917 | 5 1 0 (97) | 4 12 6 (103) | 3 1 3 (103) | 2 4 0 (420) | 7 2 0 (136) | 175 |
| 1920 | 8 6 0 (161) | 7 0 0 (188) | 5 8 0 (183) | 1 8 2 (280) | 14 2 0 (269) | 216 |

¹ It is believed that Keynes besides his post-war currency plan also has a scheme for establishing international commodity prices. It is supposed that an international monetary unit (the 'bancor') is to be evolved and that it will be fixed in terms of gold and managed so that stable relations will be maintained between gold and goods.

² Stanley Jevons, *Money, Banking and Exchange in India*, p. 261.

Adding up the percentage figures of the five commodities for 1920, we get a total of 1081. Dividing this by 5 (the number of commodities) we get 216 as the average percentage increase. This figure is called the index number and is compared to the basic index number of 100 for 1913.

In constructing an index number care must be taken to select as many articles as possible. These should be representative and must be in general demand. The commodities should not all belong to one group, because if they do, they are all likely to move in the same direction. Among the commodities left out there may be many which are largely consumed, and which are in constant demand, and the change in their case may be in the opposite direction to that of the commodities which have been included and which are all of the same type. The result will not be reliable unless most of the important types are represented. Wholesale prices are to be preferred to retail prices. The former are very much more sensitive to competition and do not vary as widely from place to place as the latter do. For certain purposes, however, the retail prices may be more informative, e.g. in measuring the variations from time to time in the cost of maintaining a certain standard of life among factory labourers.

§27. Weighted index numbers.—Since the importance of all the commodities that enter into consumption is not the same (e.g. bread is far more important than silk), a simple arithmetical average of their prices would be misleading. If, for instance, the price of bread were to rise by 50% and that of silk were to fall by 50% the index number of prices would not be affected, the rise being cancelled by the fall. But it is clear that the community would be worse off owing to the rise in the price of such a prime necessity of life as bread, though the index number failed to indicate this. Therefore the device of 'weighting' is adopted. Each price is multiplied by a number calculated to represent the relative importance of the commodity in question. Thus if bread and silk are consumed in

WEIGHTED INDEX NUMBERS¹

| Basic period—1914 | | Subsequent period—1920 | |
|--------------------|------------|------------------------|---------|
| Bread (7 units) | = 700 | Bread (7 units) | = 1,050 |
| Silk (1 unit) | = 100 | Silk (1 unit) | = 50 |
| | <u>800</u> | | 1,100 |
| Average of 8 units | = 100 | Average of 8 units | = 137½ |

¹ H. A. Silverman, *The Substance of Economics*, pp. 190-1.

the proportions of 7 to 1, the table on page 202 may be constructed to give us the weighted index.

Thus the weighted index number for bread and silk is 137½. An index number calculated by this method of attaching appropriate weights to the commodities concerned gives a more reliable idea of the real change in the value (purchasing power) of money than the index number based on the simple arithmetical average.

§28. The uses of index numbers.—Index numbers of prices are useful in dealing with many practical problems. For example, to find out whether the real wages of labour as compared to its nominal or money wages have fallen or increased or remained unchanged, the index numbers of prices or the cost-of-living index numbers are compared with the index numbers of nominal wages. The following formula (illustrated with reference to the wages in Bombay cotton mills) is used for this purpose :¹

Real Wages Index Number for December 1933, with July 1926 as 100

$$= \frac{\text{Money Wages Index Number } (83 \times 100)}{\text{Cost of Living Index Number } (72)} = 115.$$

In the second place, index numbers give us some idea of the changes in the value of deferred payments and the extent of hardship caused thereby to creditors or debtors. They furnish some measure of the inflation or deflation of currency, as the case may be, and serve to indicate the degree of contraction or expansion of currency required as a corrective. Finally, index numbers impart a certain amount of definiteness to comparisons of the value of money in different places or countries.

§29. The Quantity Theory of Money.—The Quantity Theory of Money in its orthodox form states that the level of prices varies in direct proportion to the changes in the quantity of money, or alternatively that the value of money varies in inverse proportion to its quantity. In other words, it is the quantity of money that determines the level of prices. If there are a hundred objects to be exchanged and a thousand pieces of currency, all the goods being offered against all the currency, it follows that each commodity will exchange for ten units of currency. The proposition in this form depends upon three assumptions :

(i) Every exchange of goods is accompanied by an exchange of money.

¹ *Wages and Unemployment in the Bombay Cotton Textile Industry*, p. 42, Bombay Labour Office (1934).

(ii) Money is used for no other purpose than as a means of exchange.

(iii) All the money in existence is in circulation and all the goods are offered for sale.

§30. **Modification of the Quantity Theory of Money.**—Obviously in the actual world these assumptions hold good only partially and the Quantity Theory has to be modified so as to fit the facts.

(i) The first modification is to widen the meaning of the term 'money' so as to include not only the metallic currency but all credit instruments such as notes, cheques and bills of exchange, which actually circulate and do the money work and the volume of which also influences the general level of prices.

(ii) Further, by the volume or quantity of money, we must understand not merely the physical quantity, but also the rapidity with which money changes hands. Increased rapidity or velocity of circulation will raise prices just as surely as increase in the quantity of money as ordinarily understood.¹

(iii) Again, it is clear that only that portion of money which is used as a means of exchange must be taken into account. If it is used for other purposes (e.g. metallic money may be used for ornaments or bank cash reserves) it cannot be regarded as part of the available money and therefore can have no influence on prices.

(iv) Similarly we must exclude from consideration any money which may not happen to be in circulation but may be merely hoarded.

(v) The quantity of exchanging to be done (quantity of goods to be exchanged multiplied by the rapidity with which they are exchanged) constitutes the demand for money. The larger the demand, i.e. the volume of trade, the greater the value of money (i.e. the lower the price level), other things remaining the same; and vice versa.

(vi) The demand for money also depends on the habits and convenience of people. Thus a man who receives his wages

¹ 'Suppose there are ten things, and one hundred pieces of money, and let the things be of equal value in the eye of the only possessor of the money. He will then give ten pieces for each thing, and each piece of money is used once only in effecting these ten exchanges. If, however, the man of money only desired one thing, and gave all the money for that thing, and the receiver passed it on in the same way in one lump to his neighbour in the market, and so on through the whole set of things and merchants, each thing would be sold for one hundred pieces instead of ten; and the essential point of difference is that each piece of money is used ten times instead of once.'—
Nicholson, *Elements of Political Economy*, p. 263.

weekly will tend to hold a smaller amount of currency than if he is paid at the same rate but monthly. In the former case demand for money is less, therefore its value also will be less, i.e. prices will tend to rise. In the latter case the effect will be the reverse of this.

(vii) Growth of population generally increases the demand for money, and unless this is offset by an increase in the volume of money it should cause a fall of prices (i.e. rise in the value of money). If prices are rising rapidly (i.e. the value of money is falling) people will tend to hold less of it, thus helping prices to rise further. The contrary of this holds good if prices are falling rapidly.

It will thus be seen that prices are a resultant of a large number of factors. And though we can single out each factor and say how it will by itself influence prices, the final result in any given case will depend on how the other factors are working.

§31. Peculiarities of the value of money.—Money like other things depends for its value on conditions of supply and demand. We can thus be certain that if we somehow increase the supply of money we are helping prices to rise, and that by restricting its supply we shall be helping them to fall.

A distinction may, however, be drawn between the value of money and the value of ordinary commodities. If the supply of wheat were doubled its value would probably be less than half as much as before since the demand for it is inelastic. But if the supply of money were to be doubled, other things being the same, its value would be exactly halved. The explanation is the assumption that money is in demand only as a medium of exchange and is not wanted for any other use: therefore changes in its supply produce proportionate changes in its value in the absence of disturbing factors.¹

§32. The Equation of Exchange.—The following equation, suggested by Professor Irving Fisher, is commonly used to express the truth embodied in the Quantity Theory:

$$PT = MV + M'V',$$

where P=Price level, T=Volume of trade,

M=Metallic money in circulation,

V=Rapidity or velocity of circulation of M,

M'=Money in the form of credit instruments,

V'=Velocity of circulation of M'.

¹ See also §33.

This equation could also be rewritten as follows :

$$P = \frac{MV + M'V'}{T}$$

This means that the price level varies directly with the supply of money (quantity of money multiplied by the rapidity of circulation), and inversely with demand for money (the volume of trade).

The Quantity Theory of Money is confirmed by the history of prices. The large discoveries of gold from 1895-1914 and the expansion of credit raised the general price level by greatly adding to the supply of money in the countries on the Gold Standard. Prices would have shown an even greater rise but for the fact that the increase in the quantity of money was counterbalanced to some extent by the growth of business or increase in the demand for money. So also we all know how during the last war the inflation of paper money in the belligerent countries of the world resulted in a sharp rise in the price levels in these countries. One cause of the slump in prices during the world economic depression from 1929 onwards, was held to be a decrease in the quantity of money, due partly to the shortage or maldistribution of gold and partly to the contraction of credit.

§33. Relation between the cost of specie and value of money.—

The value of money, like the value of other commodities, is in the long run influenced by changes in its cost, i.e. changes in the cost of production of the precious metals, especially gold. (We are assuming the general prevalence of the Gold Standard.) Thus a lower cost of mining gold will increase its supply—and therefore the supply of money—and raise the price level (i.e. lower the value of money). On the other hand, a higher cost will lower the general prices by diminishing the supply, and raise the value of money. As in the case of ordinary commodities, the relation between cost and value is mutual. Thus if the value of money is high (i.e. all money costs of labour, raw materials, etc. are low), the supply of specie or money is likely to be greater since even the comparatively poorer mines can be worked with profit. If the value of money is low (i.e. money costs are high), the supply will tend to be less, since the comparatively poorer mines will cease to be worked. Owing to the durability of precious metals and the existence of large old stocks, changes in their annual output influence their value very slowly, unlike the case of ordinary commodities with negligible old stocks. Therefore during comparatively short periods it is the value of money which influences

mining activity and determines which mine will be the marginal mine, i.e. just worth working at the current value of money (or the current price level). In the long run, however, changes in the cost of production of specie do affect the value of money.

§34. Price changes and their effects on the different sections of the community.—It has been shown above that fluctuations in prices take place either owing to changes on the money side of the equation (supply of money as influenced by its quantity and velocity of circulation) or owing to changes on the goods side (demand for money as influenced by the volume of goods to be exchanged for money and their rapidity of circulation). These changes in the price level or the value of money (its purchasing power over goods and services) create widespread economic disturbances, since the modern economic system is based upon a price structure and long-term contracts resting on the assumption that the value of money will remain stable. Some of these effects are noticed below.

(i) *Creditors (investors) and debtors.*—A rise in the price level affects creditors adversely and debtors beneficially. Between 1914 and 1920 prices in India were roughly doubled, and therefore a loan of Rs. 100, contracted in 1914 and repaid in 1920, meant a loss to the creditor, since with the Rs. 100 which he received in 1920, he could purchase only one-half of what he could have purchased in 1914, when he advanced the loan. The burden of the debt for the same reason is lightened for the borrower if prices rise. Conversely, a fall in prices is of advantage to creditors but burdensome to debtors. Thus changes in prices disturb the equities of debt payments, especially in the case of long-term contracts (this also applies to public contracts, e.g. long-term public loans).

(ii) *The business community.*—Producers and merchants welcome a rise in prices, since their costs of production—such as wages and interest charges—do not increase as fast as prices. They take time to adjust themselves to the change in prices. In the meanwhile the profit-margins are widened and business activity is stimulated. On the other hand, falling prices are considered bad for trade and production, since profit-margins are reduced owing to the failure of costs (wages, etc.) to adjust themselves quickly to a lower price level. Producers and employers of labour thus act as a buffer between prices and wages, absorbing the shock caused by price changes and experiencing first their good or bad effects. Part of the explanation of the optimism of the business community in the case of rising prices and pessimism in the opposite case is, however, purely psycho-

logical. When prices rise, money incomes also rise, and that becomes a matter of jubilation by itself, even though the value of money may have diminished. Similarly a decline in prices is dreaded because it leads to a diminution of money incomes, although real economic welfare might remain unaffected owing to the increased purchasing power of money.

(iii) *Wage-earners*.—Wages are generally the last to rise and the last to fall. Therefore a rise in prices is disadvantageous to wage-earners since the purchasing power of their incomes is reduced. A fall in prices, on the other hand, is welcomed by them since their real wages are greater for the time being. At the same time high prices and high profits mean more business activity and therefore better employment for labourers. Low prices bring about stagnation of business activity and therefore reduce the volume of employment.

(iv) *Persons living on fixed incomes*.—Persons living on fixed incomes in the shape of pensions, interest or rent, suffer in a period of rising prices and gain in a period of falling prices, since the purchasing power of their *fixed* incomes shrinks in the former case and expands in the latter case.

Thus rapidly rising as well as rapidly falling prices create an unstable economic equilibrium in society by causing serious disturbances in the relative distribution of wealth. This means disturbance in industry and unequal and undeserved gains and losses to different classes. Production is undertaken long in anticipation of demand and is based upon certain anticipated prices, and long-term contracts are entered into on the assumption that the value of money will not change. A reasonably stable price level or stability in the value of money in terms of goods and services is therefore highly desirable for the smooth functioning of the economic machinery of the world.

§35. **The problem of price stability.**—The serious and violent disturbances in prices during and after the last war have attracted a good deal of attention towards this fundamental issue. Modern writers on money have laid great emphasis on the internal stability of prices. It is argued that while stability of the external value (the exchange value of a currency unit in terms of other currencies) of a country's money is an important facility to foreign trade, it is not so important as the stability of the internal value of money or the internal price level. This objective of monetary policy is capable of being attained in a large measure by the careful regulation of the volume of money (currency and credit) in each country. If this were done by all countries, external stability would also be largely realized. Plans for reconstruction after the present war are bound

to fail unless they include monetary reconstruction. Schemes, such as those of Lord Keynes, aiming at currency and price stabilization assume international co-operation. Among the arrangements contemplated is the establishment of an International Equalization Fund to which gold is to be contributed by such countries as possess it. The gold, and the credit based on it, is to be used for the settlement of post-war balances and payments. At present co-operation is visualized among the allied nations and more especially between England and America. But eventually all the important countries will have to join.

§36. The Multiple or Tabular Standard.—Some writers, such as Jevons, have recommended the use of an official index number as a standard of deferred payments. This is called the Tabular or Multiple Standard since it is based on the average movement of prices of a number of important commodities, which thus form a basis for a unit of general purchasing power in terms of which long-term obligations might be expressed and adjusted. This scheme is attractive, but it is not so simple as it looks. It is by no means easy to construct a reliable index number of prices. The official agency entrusted with this task might also be biased, arbitrary or corrupt. Moreover, the uncertainty of the changing official index number would make commercial transactions speculative.

§37. Plan of a compensated dollar.—Another interesting plan is suggested by Professor Irving Fisher in his book *Stabilizing the Dollar* (1920). He proposes 'to adjust the weight of the dollar (i.e. the gold bullion dollar) at stated intervals, each adjustment to be proportioned to the recorded deviation of the index number from par'. Thus a rise in prices would be counteracted by adding to the weight of the dollar, and a fall in prices by deducting from it. The 40% reduction in the gold content of the U.S.A. dollar in 1934 was intended to check falling prices and raise them to a desired higher level.

The problem of price stability has not, so far, been satisfactorily solved. An International Gold Standard, worked under close co-operation among the Central Banks of the world, should yield satisfactory results. The present unsatisfactory international situation, however, does not justify our expecting an early realization of such hopes.

§38. Other essentials of a sound monetary system.—Stability of the value of money, internal and external, is the first essential of a sound monetary system. Other essentials are: (i) certainty, (ii) simplicity, (iii) elasticity, and (iv) economy.

(i) *Certainty*.—The principal features and the mechanism of the monetary system of a country should be definite

and certain. This is accomplished by a comprehensive monetary law precisely defining the various obligations of the currency authority. For example, the Gold Exchange Standard, as it was operated in this country until recently, did not fulfil this condition, since too much was left to the discretion of the Government and the standard was nowhere precisely defined.

(ii) *Simplicity*.—The monetary system should be simple and readily intelligible to the ordinary citizen. The Gold Currency Standard, judged by this test, is less complicated than other forms of the Gold Standard or Managed Currency Standard. Some writers attach special importance to this consideration in India where the general level of enlightenment is low.

(iii) *Elasticity*.—It is also necessary that the monetary system of a country should be elastic. It should be capable of automatic expansion and contraction according to the monetary needs of the country. In a mainly agricultural country like India, with its cycle of busy and slack seasons, it is particularly necessary that the monetary system should be sufficiently elastic to meet the varying seasonal demands for currency.

(iv) *Economy*.—Lastly, economy should be one of the guiding considerations of a sound monetary system. For example, the Gold Bullion Standard is more economical than the Gold Currency Standard, and a well-managed Paper Currency Standard is the most economical of all—although in practice such a standard usually breaks down.

No rigidly uniform system can be applied indiscriminately to every country. Each country must decide which is on the whole the best workable system suited to its special conditions.

SUMMARY

If there were no money we should have to fall back on barter, which is a most clumsy and inconvenient method of exchange. (i) Barter is possible only where there is the double coincidence of wants and possessions. (ii) Even then, endless higgling would result in settling the terms of bargains. (iii) Money can be divided into any units, small or large, but usually things cannot be so divided.

Money functions as a (i) medium of exchange, (ii) measure of value; (iii) store of value; (iv) reserve for bank credit; and (v) standard of deferred payments.

In order to be able to perform these functions satisfactorily, the money-material should preferably possess all of the following qualities: (i) Portability, (ii) Durability, (iii) Intrinsic value, (iv) Homogeneity, (v) Divisibility, (vi) Malleability, (vii) Cognizability, and (viii) Stability of value.

Of all things tried so far, the precious metals (gold and silver) have been found the best to fulfil these requirements.

A *standard coin* is (i) a coin of which the contents are defined by law; (ii) its face value is the same as its intrinsic value; (iii) it is unlimited legal

tender; (iv) it is freely coined; and (v) all values are expressed in terms of it.

Token coins are (i) limited legal tender; (ii) not freely coined; and (iii) their intrinsic value is smaller than their face value. They succeed in maintaining the artificial value given to them because they are required for small payments and are issued in limited quantities.

Standard coins and token coins are both stamped by the Government. In the case of standard coins the Government also guarantees the weight and the fineness of the metal used.

Free coinage means the right of any holder of bullion to have it converted into (or exchanged for) standard coins at a fixed rate and without any limit of amount.

Coinage is *gratuitous* when there is no charge levied for conversion of bullion into coin at the mint.

The *mint price* means the rate at which standard coin is given for bullion at the mint.

Debasement means the deliberate and illicit reduction of quantity or proportion of fine metal in the standard coin—an activity at one time indulged in even by Governments (generally by needy and unscrupulous sovereigns) but now confined to crooks and swindlers.

When any kind of money is said to be *legal tender* (or *full* or *unlimited legal tender*), it means that it can be legally used for the full discharge of obligations without limit of amount. When it is said to be *limited legal tender*, it means that nobody can legally be compelled to accept it for payments beyond a certain amount stated by law.

Gresham's Law states that when good and bad money are circulating together, the bad money eventually drives the good money out of circulation. The law applies not only in the case of good and bad coins of the same metal but also to conditions arising under bimetallism and when a depreciated paper money is circulating side by side with metallic money.

Gresham's Law holds good subject to the following qualifications: (i) It acts only when a large number of people discover that some money is bad and some good, and desire to abstract the good money from circulation for more profitable uses. (ii) Both good and bad money may continue together if the total supply of money is sufficiently limited. (iii) The law assumes that there is no difficulty about the bad money being accepted as a medium of exchange.

Under *monometallism* standard coins only of some one selected metal are in circulation. We have *bimetallism* when there are *standard coins* of two metals (gold and silver) in circulation with a fixed legal ratio of value between them. Under the *Paper* or *Managed Currency Standard* only paper is in circulation without any guarantee of convertibility at a fixed rate into the standard metal or standard coins.

A country is said to be on the *Gold Standard* when all values are measured in gold and the standard monetary unit is always maintained at a certain defined value in gold.

A Gold Standard with actual gold coins in circulation is called the *Gold Currency Standard*. Under the *Gold Bullion Standard* no gold coins are in circulation, but all legal tender currency (e.g. Bank of England notes in England) is convertible into gold (not in the form of coins but of bars) at a fixed rate. Gold is similarly convertible into legal tender currency, and export and import of gold are unrestricted as under the Gold Currency Standard.

Under the *Gold Exchange Standard*, the internal currency consists of cheap tokens of silver or paper. The internal currency is maintained at a certain fixed value in terms of gold by providing for its convertibility into gold exchange, i.e. bills and drafts on a foreign centre where the gold standard is in effective operation. Arrangements are also made for converting gold into local currency.

Quite a number of countries are at present off the Gold Standard. It has, however, broken down not because of its inherent defects but owing to certain exceptional circumstances and owing to the failure on the part of certain important countries to fulfil the conditions for its successful functioning. The Gold Standard, in spite of its difficulties and inconveniences, is still the most satisfactory and the least risky system of all and it is possible to make it more elastic and less costly, e.g. by dispensing with gold in circulation, by decreasing the proportion of the metallic reserve and by active co-operation among the Central Banks of the world. The principal merit of the Gold Standard is its simplicity and the protection it affords against the evil of inflation.

Bimetallism had a long innings in Europe of about 200 years, till sudden changes affecting the production of the precious metals since the middle of the nineteenth century began to subject the system to violent disturbance. Gresham's Law came into operation and now silver and now gold began to disappear from circulation. The efforts of the countries of the Latin Union to maintain both the metals in circulation proved unavailing. Bimetallism was finally abandoned by practically every country—a process which was powerfully helped by the example of England. France and other members of the Latin Union adopted what is known as the *Limping Standard*. Bimetallism in practice works out as an alternating standard of silver or gold. International bimetallism is theoretically a workable proposition and would ensure even a greater stability of prices than under the Gold Standard. But owing to the opposition of some important countries, like England and Germany, and of the banking world it has not so far been found feasible to give a trial to bimetallism on an international scale. If the necessary international co-operation is forthcoming, an even more promising experiment than bimetallism would be some sort of an International Managed Paper Currency Standard.

At present most of the important modern nations have a *Managed Paper Currency Standard*. It is cheap and its quantity and therefore its value are more susceptible to conscious regulation than is the case with the precious metals. But it is a curse if the temptation to over-issue is not firmly resisted. This applies particularly when we have fiat or inconvertible paper money. In the case of fiduciary or convertible paper money, the principal precaution against its depreciation is to maintain a sufficiently strong reserve for ensuring convertibility. Danger signals of inflation and depreciation of paper money are (i) a premium on gold, (ii) a rise in the rate of exchange (unfavourable exchange), (iii) external drain of gold, (iv) rise of prices, and (v) two sets of prices—one in gold, which is lower, and the other in paper, which is higher.

The evils of depreciation are (i) undeserved and unexpected losses and gains to different classes of people, (ii) uncertainty in business and in international trade and in all kinds of contracts based on money, and (iii) private and public extravagance. It is possible to have an inexpensive and sanely regulated system of paper money. But the pitfalls are so numerous and the

memories of monetary chaos due to over-issue and inflation during the last war and the post-war period are still so vivid that even the most advanced among the western nations is likely for some time to come to prefer the safety of the Gold Standard to the possibly superior advantages of a cautious and wisely regulated system of paper money.

It is often necessary to find out the extent of change in the *value of money* during a given period. The device of *index numbers* is used for this purpose. It can be depended upon to give an approximately correct measure of the change, provided we are careful to select commodities (i) sufficiently numerous to represent general consumption, and (ii) not belonging to the same group.

Generally speaking also it is better to use wholesale rather than retail prices. When the commodities selected are given weights expressing their relative importance, we get *weighted index numbers*.

The *Quantity Theory of Money* states that the level of prices varies in direct proportion to changes in the quantity of money. This is true subject to the following qualifications and assumptions, that: (i) money is used at every exchange of goods, (ii) money is used only for exchange and only such money is taken into account; (iii) all the money in existence is offered against all the goods produced for sale, (iv) money includes not only metallic money but all the credit instruments which do money-work; (v) quantity of money means the physical quantity combined with rapidity of circulation, and (vi) the level of prices (or the value of money) is determined not only by its quantity (supply) but also by the various factors governing the demand for it (e.g. volume of transactions, etc.) (The elasticity of demand for money is always equal to unity.) The truth of the Quantity Theory is illustrated by price changes in recent times.

As in the case of other commodities, the cost of production of precious metals is one of the factors governing their value and the value of the money which may happen to be based on them. But owing to the huge volume of precious metals already in existence, the position as regards their supply in any given year does not appreciably affect the value of the total stock, though in the long run the cumulative effect of the yearly supplies will make itself felt.

A *rise of prices* is favourable to debtors, producers and merchants; and unfavourable to creditors, wage-earners, and those with fixed money incomes. A *fall of prices* exactly reverses this position.

Wage-earners, however, may stand to lose *on the whole* by falling prices if this seriously diminishes profits and enterprise, and therefore the volume of employment available.

The question whether complete *stability of prices* is desirable need not be asked, because such a thing is unattainable in a changing world. Violent fluctuations are, however, unquestionably harmful. Several plans have been proposed for achieving at least relative stability. Probably the best results will be obtained by an International Gold Standard and close and systematic co-operation among the Central Banks of the world. Present conditions are, however, not very favourable to such co-operation. (Violent price changes are always bad. If the alternative is between gradually rising prices and gradually falling prices, we should be inclined to favour the former because they act as an incentive to economic activity.)

Apart from comparative price stability, other minor *essentials of a sound monetary system* are certainty, simplicity, elasticity and economy.

XI

EXCHANGE: CREDIT AND BANKING

CREDIT

§1. **Nature and characteristics of credit.**—Among civilized men economic transactions are largely based on mutual credit or faith. Many people, for example, entrust their money to banks in the faith that when they want it back the banks will be willing and able to return it. Again, a very large volume of buying and selling takes place not on a basis of cash but of credit (that is, a promise to pay in the future). The shopkeeper allows us to run up bills because he has confidence that we shall discharge the bills at a future date. Banks very often advance money to business people and others in different ways, usually against some security, but always in the expectation that the borrower himself or someone else will be willing and able to fulfil the promise of future payment. In a well-constituted State, the aid of law also can be invoked, if necessary, to enforce the fulfilment of these promises—implied or explicit. This preparedness to trust each other, and the fact that it is in most cases justified, has most important economic consequences, as we shall see presently.

Credit involves a temporary transfer of wealth. In this way some person or body of persons acquires the right to enjoy wealth the ultimate economic title to which belongs to someone else. Credit may, of course, take the form of a loan of concrete goods or the temporary transfer of a mere right or privilege. But in most modern instances of credit the thing lent is money, so that credit becomes a contract for the future delivery of money by the borrower to the lender. It is evident that, owing to the time element in credit, the lender or creditor necessarily exposes himself to a certain amount of risk, because his confidence in the probity or solvency of the borrower may prove to be misplaced and the borrower may fail to meet his obligations on the stipulated date.

We may now give a more formal definition of credit. 'Credit is an exchange or transaction which consists in the temporary transfer of the use of wealth in the form of concrete goods or a fund of capital or a mere right or privilege. The essence of credit is the right of enjoying something, in most cases money, the ultimate economic title to which belongs to

another.¹ Credit, as pointed out above, nowadays is virtually a contract for the future delivery of money. Time and confidence are the two essential features of credit.

§2. **Productive and unproductive credit.**—According to the use made of credit we distinguish between productive credit and unproductive (or consumption) credit. For example, when the Indian peasant borrows for marriage expenditure, credit is used unproductively. But if he borrows for land improvement or for meeting cultivation expenses, credit is productively used. In the modern economic organization credit is mostly used for productive purposes. The principal unproductive use of credit today is when huge war loans are contracted by the State.

§3. **Credit instruments.**—The promise to pay in the future takes various forms, which include *verbal* and *book credits*.² The principal credit instruments are promissory notes, cheques and bills of exchange.

A *promissory note* is a written promise by the debtor to pay a certain sum of money to the creditor, either on demand or at the expiration of a specified period. The creditor or the 'payee' can endorse (sign) the note and thus make it negotiable or transferable. If there is one endorsement on the note it is called double-name paper, because both the maker (the original debtor) and endorser are responsible. Many of the loans granted to ryots in India by moneylenders are supported by such promissory notes. Another important class of promissory note comprises the currency notes issued either by the Government (as in India until recently) or by some authorized institution like the Bank of England in Great Britain. These notes are payable on demand and form part of the regular legal-tender currency of most countries. Promissory notes are also extensively used in connexion with the inland or internal trade of a country, and are included in 'commercial paper'. (See Fig. 14.)

Next we have *cheques*. A cheque is a written order signed by a depositor—an individual or a firm—on his bank, ordering the bank, on demand, to pay a certain sum of money to a third person or to the drawer himself, or his order, or to the bearer. Sometimes a cheque is crossed, i.e. two lines are drawn obliquely across the cheque (see Fig. 15). Like the

¹ Seligman, op. cit., p. 496.

² 'Verbal credit' is a loan granted on the mere verbal promise of the borrower to make payment at a certain time. 'Book credit' (or 'book debts') is the credit granted and entered in the books (ledgers) of the creditor. It is credit on account. The entry in the ledger is evidence of the credit granted. There is no such evidence or verbal credit unless there is a third party as a witness.

Rs. 500/-

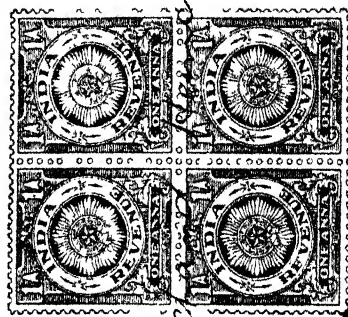
Bombay, 27th December, 1935

On presentation I promise to pay to the order of

Ramlal Kapurchand
 Rupees five hundred only
 at Benares

with interest at 6 % per annum.

Value received



Rupchand

No. 672.

FIG 14.—SPECIMEN OF A PROMISSORY NOTE

8th September 1935

N^o C144,251

43



Lloyds Bank Limited

INCORPORATED IN ENGLAND

Bombay.

8th September 1935

Ramlal Hirald

Pay Ramlal Hirald

Order
or Bearer

Rupees one thousand only

Rs. 1000/-

Rupees one thousand

London Office of Eastern Department 19 Mercantile Street C.C. 2

FIG. 15.—SPECIMEN OF A CROSSED CHEQUE WITH COUNTERFOIL ATTACHED
(Reproduced by kind permission of Lloyds Bank Ltd., Bombay)

ordinary cheque, the crossed cheque is also drawn upon a bank, but it can be paid only to the bank to whom it is crossed. The name of the bank in whose favour it is crossed is sometimes written between the two lines drawn obliquely across the cheque. Such a cheque is generally carried to account and is safer than the ordinary cheque; even if it is stolen, it is of no use to the thief since only the bank in whose favour it is crossed can obtain payment on it. A cheque drawn by one bank upon another is known as a *banker's draft*.

A *bill of exchange*¹ is an order by one person or firm (called the 'drawer') drawn on another person (a firm or a bank, called the 'drawee') instructing the latter to pay a certain sum of money for value received to a third party or to the drawer (called the 'payee'). But, unlike a cheque, a bill of exchange is not necessarily payable on demand or at sight, but at some future date; it may be after thirty days or sixty days or ninety days, but generally not longer than six months. It is called a 'sight bill' if the payment is to be made as soon as the drawee has seen it (i.e. on demand). If the payment is to be made at the expiration of a fixed period it is called a 'time (usance) bill'. The person on whom the bill is drawn may either accept the bill by signing it as 'Accepted' or decline to make payment (signing 'Protested'). The acceptor becomes legally liable to make the payment due on the bill. If the drawer and the drawee are in the same country the bill is called a domestic bill; if in different countries, it is called a foreign bill (an export or import bill).² Fig. 16 is a specimen of a bill of exchange, the acceptance being written across the bill by the 'drawee'.

§4. How credit economizes the use of metallic currency.—

The element of trust involved in a cheque or bill of exchange is greater than in a Government or bank note. The note is as good as cash because it can generally be converted into cash: the State or a State-authorized bank undertakes the responsibility for conversion. The note is also legal tender, which a cheque or bill of exchange is not. A vast volume of transactions is conducted by means of cheques and bills of exchange, and a great economy in the use of the precious metals as currency results. This is facilitated by two devices. In the first place, both cheques and bills of exchange (as also promissory notes) are negotiable, i.e. they can be transferred by the payee or the person in whose favour they are drawn by endorsement to another person. In the case of cheques

¹ A *hundi* is a variety of the domestic bill of exchange. See *Elements of Indian Economics*, ch. vi.

² See ch. xii.

made payable to the bearer ('bearer cheques' as they are called), the transfer is effected merely by delivery from hand to hand as in the case of a bank note. Thus before a cheque or a bill of exchange is finally cashed or 'retired', it may have passed a number of times from hand to hand, being used like money for the discharge of obligations. Cash or use of actual money is thus dispensed with so far as the intermediate transactions are concerned. Secondly, there is the device of the 'clearing house', which is described below.

§5. **The bankers' clearing house.**—In most of the big banking centres like London, New York, Calcutta and Bombay, there is an institution called the bankers' clearing house, on which are represented the principal banks in the centre. This organization performs the function of offsetting cross (*contra* or *mutual*) obligations in the form of cheques on each other received by the various banks in the course of their day's transactions. The leading bank of the place (generally the Central Bank) presides over the clearing house and acts as a banker's bank, and as the other banks keep an account with it, it can adjust in its books the deficit against or balance in favour of the various member-banks after offsetting the different claims of the banks amongst themselves. The member-banks usually keep certain balances with the Central Bank and pay the difference by a draft on the latter, generally called a 'banker's deposit'. Thus the business of 'clearing' inter-bank indebtedness is transacted and the necessary adjustments are effected by book entries without any cash changing hands. In the London clearing house, for example, barely 1% of the cheques is actually cashed.

§6. **Economic functions of credit.**—(1) The principal use of credit is that it enables men of enterprise and initiative to embark upon large-scale ventures on borrowed capital. It mobilizes the existing capital, i.e. makes its more effective use possible. It enables production to be initiated long in advance of demand, that is, in advance of the sale of the product to the consumer. (2) It transfers capital from those who cannot or do not wish to use it themselves to those who have the desire and the capacity to use it profitably. Naturally, those business men who are known to be competent obtain credit more easily than those of unproven ability. Credit thus exercises a selective influence and encourages the survival of the fittest amongst industrialists and business people. It is clearly advantageous to the community that capital should flow into the hands most capable of using it well. Further, some businesses are liable to come to a standstill unless through credit

a continuous supply of capital is ensured. Credit may also be said to promote the progress of invention because the introduction of inventions and new processes requires capital, the supply of which is facilitated by credit. Credit is to be distinguished from capital in the same manner that money is distinguished from capital. Both money and credit stand for purchasing power, and whether or not they represent or stand for capital depends on whether they are spent on the capital necessary for further production or on objects of immediate consumption.

(iii) Thirdly, as already seen, credit enables considerable economies in the use of gold (metallic money) to be effected, and provides convenient media of exchange, such as bank notes, cheques and bills of exchange.

§7. Abuses of credit.—Like every human device credit is liable to be abused. If the borrower uses credit recklessly and wastefully he inflicts ruin both upon himself and on the lender. Moreover, there is the danger that credit may be issued to excess by the banks (who are the principal dealers in credit to-day) so that the economic stability of society is endangered and speculation encouraged. Overproduction may ensue as one of the evil results. The unwise use of credit may also enable the weakness of business concerns to be concealed for quite a long time, making the inevitable crash all the more disastrous when it comes. Hence the need for careful regulation.

BANKING

§8. Utility of banking.—Banking occupies a most important position in the modern economic world. Banks are dispensers of credit, and we have already examined the numerous ways in which credit serves the community and keeps the wheels of commerce and industry revolving. By offering opportunities for investment and safe custody of deposits, banks stimulate the habit of thrift or saving, and discourage hoarding or an unproductive use of surplus wealth, thus promoting investment and the growth of capital. A wise banking policy may go a long way towards mitigating the shocks of an economic crisis. While all these advantages can be reaped from a sound banking organization wisely conducted, a banking system, if badly constructed and badly handled, is capable of inflicting great harm on trade and industry and of seriously impeding economic progress.

§9. Banking: definition and functions.—Banking means the business of dealing in credits, and a bank means an institution whose main business is receiving deposits from the public and

on the basis of them making advances and loans in such a manner as to make a profit for itself ¹

The functions of banks.—Modern banks perform a variety of functions, some of which are given below :

(i) Various kinds of *money dealings*, such as money-changing, shipment of money or bullion, purchase and sale of bullion

(ii) *Receiving of deposits* —This is considered in greater detail below ²

(iii) *Discounting* (i.e. purchasing at present worth) commercial paper (e.g. bills of exchange and promissory notes) ³

(iv) *Granting loans in other ways* either by advances against securities or by way of overdraft, ⁴ mortgage loans, or by the purchase of shares in industrial companies

(v) *Issue of bank notes* —This function, as we shall see later, ⁵ is nowadays virtually restricted to the Central Bank of Issue. In the eighteenth century it was regarded as an essential function of all banks

(vi) *Dealings in foreign exchange* ⁶

(vii) *Issue of securities* (e.g. bonds or shares for joint-stock companies)

(viii) *Performing agency functions* on behalf of clients, such as (a) safe custody, sale or purchase of securities; (b) safe custody of other valuables; (c) collection of dividends and interest for clients, (d) acting as correspondents and clearing agents for other banks (e) issuing letters of credit to travellers, (f) acting as trustees, executors, attorneys (g) serving as bankers to joint-stock companies, (h) the Central Bank of a country acts as the agent to the Government and performs banking functions for the Government ⁷

§10 **Some features of modern banking.**—(i) *Banking specialization* —It must not be imagined however, that all these functions are performed by every bank. There is a division of labour and specialization here as elsewhere. Thus what are known as commercial banks accept deposits for short periods and lend credit also for short periods (for the current finance of trade and industry) in England, the U.S.A. and India. As distinguished from these, there are the industrial or investment banks, like those in Japan which extend long-term finance, i.e. lend money for long periods to industrial concerns and raise their working capital by debentures. Some

¹ 'The term bank is ordinarily applied to an institution which receives deposits of money or of credit and which seeks profits through the extension or sale of its own credit' E. E. Agger, *Organized Banking*, p. 19

² See §§11-13 ³ See §14 ⁴ See §14 ⁵ See §16 ⁶ See ch. xii ⁷ See §20

banks, as the credit banks in Germany, are of the mixed type and combine ordinary commercial banking with investment banking. Certain banks specialize in land mortgage banking, some in savings banking, some in co-operative banking, some in the financing of foreign trade or foreign exchanges. The Central Banks are in a class by themselves. They are generally empowered to issue paper currency and their outlook is national and different from that of the ordinary banks, which are ordinary profit-making concerns.

(ii) *Bank amalgamations*.—Another striking feature of modern banking organization is the process of bank amalgamations under the stimulus of much the same forces (namely, a desire to avoid competition and ensure economies) as promote large-scale production, large-scale management and combinations. Thus England has its 'Big Five' (Barclays, Lloyds, the Midland, National Provincial and Westminster banks). The advantages of amalgamation are efficient organization and the control of banking through highly-paid expert managers, the centralization of reserves, cheaper and wider banking facilities, and services throughout the country and the world. As usual, certain disadvantages show themselves if the process of amalgamation is carried too far so that the whole organization becomes unwieldy, cumbersome and excessively centralized and leads to the neglect of local interests. Financial resources may also come to be centralized in the hands of a single organization with all the attendant evils of unchallenged monopoly. It is, therefore, felt that something must be done to check amalgamation beyond a certain stage. In Great Britain, as recommended by a Committee of Inquiry in 1918, the sanction of the Treasury is now necessary for further amalgamations. The following may be mentioned as striking instances of amalgamations which occurred in the early post-war period (1919-39) in India: (a) the amalgamation of the three Presidency Banks into the Imperial Bank of India (1921), and (b) of the Central Bank of India with the Tata Industrial Bank (1923).

(iii) *Branch Banking versus Unit Banking*.—In this connexion, a word or two may be said about two rival systems of banking: branch banking and unit banking. Under the branch banking system there is a small number of very large banks, each having numerous branches. Where the rival system obtains, as in the U.S.A., there are a great many small independent banks. The branch banking system has made great strides in England, Australia, Canada, South Africa and France. On the other hand, the U.S.A. still maintains the

opposite and original type—the “unit banking” system. In this system the bank’s operations are confined in general to a single office, though some few are allowed to have branches within a strictly limited area. This legal restriction of the area of operations . . . is the outcome of the traditional fear of a “Money Trust”, and particularly the suspicion with which the operations of the New York financiers are viewed in the Middle and Far West. Even Central Banking in the United States has been affected by this powerful historical force—the Central Bank of the United States is a federation of twelve banks, each with its own region.¹ In India, we are largely following the branch banking system, the Imperial Bank of India having much the largest number of branches, while other joint-stock banks, such as the Central Bank of India, follow the same system. In favour of branch banking, it can be said that it enables funds to be transferred from one branch to another according to the needs of the different localities they serve. A more even distribution of risks geographically as between various types of enterprise, economy of reserves, and cheap and widespread banking facilities are other advantages. Its principal defects are the possibility of monopolistic control, excessive centralization of authority at headquarters, and neglect of local interests. Money collected from one branch may be sent to headquarters or another branch. The local manager may be shifted about from branch to branch so that he does not get an opportunity of studying thoroughly the conditions and needs of any particular locality. The unit bank possesses opposite merits and weaknesses. On the whole, however, the advantages are overwhelmingly in favour of the branch-banking system, which is tending to be a general type over the greater part of the world.

§11. The principal operations of a commercial bank: Deposit banking.—We shall now discuss in greater detail the principal functions or operations of modern commercial banks.

Deposit banking —The first business of a bank is to receive deposits from the public in order to increase its working capital beyond its own share capital, for the purpose of making loans and investments. It pays a lower rate of interest on the deposits which it receives than what it charges in its turn to its customers who borrow from it. This difference constitutes its profit.

At one time the chief function of a banker was money-changing. This was necessary because there were numerous kinds of coins, domestic and foreign, in circulation. In the

¹ R. S. Sayers, *Modern Banking*, p. 21.

seventeenth century, goldsmiths in England undertook this business, as did the Bank of Amsterdam at an earlier period.¹ The *shroffs*, or indigenous bankers in India, performed a similar function in the pre-British period. The next stage was deposit banking. People placed their coins for safe custody with the goldsmiths, who gave written acknowledgements for them. At first they allowed oral transfers of such deposits and later accepted written orders which, as time went on, came to have more and more of the characteristics of modern cheques. The goldsmiths used a part of this money to make advances. Sometimes, as in England, the reigning monarchs took advantage of this facility and borrowed money on interest-bearing securities. Similarly in India, the indigenous bankers used to receive deposits from the public for safe custody. They also served as State financiers. In England, owing to the repudiation of his debts to the goldsmiths by Charles II, the old system received a rude shock. It was partly the exigencies of the State (the war expenditure of William III) and partly the rise of England as a commercial nation that led to the establishment of the Bank of England in 1694 by Act of Parliament. For all practical purposes this may be regarded as the starting-point of modern banking. Deposit banking gradually developed, and along with it the cheque system which has already been explained. Bank deposits, originally confined to coins, gradually took the form of bank notes in the eighteenth century, and later of cheques sent to a bank by its customers to be carried to their account. In the nineteenth century, the note-issue function gradually receded into the background, and deposit banking made a great advance. Note issue came to be restricted to a few banks, and in almost all countries is now confined to Central Banks of Issue.²

We may point out here that there are two kinds of deposits : (i) *deposits of money* (cash or claims to cash) left with a bank by depositors, and (ii) *deposits of credits* issued by the bank to its clients against suitable security. The latter kind of deposits have come into great prominence today. Business men greatly prefer to have means of payment made available to them by deposit credits. That is, when loans are granted to business men, they generally take the form of current account deposits in the name of the borrowers, which they can draw upon by means of cheques as need arises. Whether deposits consist of money in cash or of credits, the bank is always bound to pay in money, whenever called upon to do so, and it must

¹ For an interesting survey of the ancestry of the modern bank see Geoffrey Crowther, *An Outline of Money*, pp. 40-2.

² See §16.

therefore maintain a sufficient cash reserve to meet all demands. For instance, the British banks generally seek to maintain a 9 per cent cash ratio (reserve) in relation to their deposit liabilities. As we shall see later on,¹ part of this reserve is generally kept as a deposit with the Central Bank, which thus comes to hold the banking reserves of the country as a whole. In a few countries, for example the U.S.A. and India, the law prescribes a statutory minimum cash reserve against the deposit liabilities of banks. Banks, like insurance companies, work on the principle that at any given time claims for payment are made only in respect of a certain fairly calculable proportion of the deposits, so that a surplus is available which they can invest or lend at interest to their clients and thus make a profit.

§12. Limitations to the creation of bank money.—It is sometimes argued that banks can 'create' deposit money or 'bank money' as it is called, without any restriction. This is, however, a misconception as there are definite limitations to the 'creation' of deposit credits. In the first place, banks have to maintain certain cash reserves. Thus supposing that the reserve ratio—whether fixed by law or custom—is 10 per cent, banks can only 'create' money up to the total of ten times this cash reserve. The total cash available to the banks is partly determined by the action of the Central Bank (see §§21-5 below) and partly by the demand of the public to hold cash. Secondly, nearly every loan—which creates a deposit, as Hartley Withers said—is secured upon some form of valuable security. 'Thus the bank does not "create" money out of thin air; it transmutes other forms of wealth into money.'² Lastly the borrower must pay a certain rate of interest to the bank on the loan which is carried to his current account and must therefore have a certain earning capacity.

§13. Classes of deposits.—There are three main classes of deposit accounts: (i) *Deposits on current account* which can be withdrawn by the depositor on demand without any previous notice. Therefore on such accounts the banks usually allow little or no interest. Indeed, if such deposits fall below a certain minimum they generally charge a certain commission. These accounts can be operated by means of cheques.

(ii) *Deposits on fixed account.*—These are kept with the banks for fixed periods ranging from one month to twelve months and in some cases for some years. In the case of these deposits, the banks get notice of withdrawals and are ready to pay interest because they can be invested more freely than deposits on current account, the rate of interest varying

¹ See §20.

² Crowther, op. cit., p. 47.

directly with the length of the period of deposit. The longer the period, the higher the rate of interest allowed.

(iii) *Deposits on savings account.*—Special facilities are given by commercial banks to attract such deposits. There are also special savings banks (e.g. Postal Savings Banks in India) which accept very small sums, allow interest, and permit withdrawal on a limited scale (say twice in a week). This variety of deposit banking suits the middle and the lower middle classes and promotes the habit of thrift. It is particularly useful in rural areas.

The cheque system and clearing houses.—These are intimately connected with deposit banking and have already been described while discussing the instruments of credit and the uses of credit.¹

§14. **Loans and advances.**—We shall now proceed to explain the principal types of loans advanced by banks to their clients, varying in their forms and conditions of interest.²

(i) *Loans against specific promises to pay.*—The simplest form of loan is the 'clean' advance on the personal note of the borrower, called the single-name paper. When such a note is endorsed by a friend or business associate of the borrower, it is called a two-name paper. Such endorsements may be multiplied, thus adding to the value of the security.

(ii) *Collateral loans.*—These are advanced against promissory notes supported by the pledging of stock or bonds, called, in this connexion, 'stock exchange collateral'. These are usually easily marketable bonds, certificates of stock, etc. The stock exchange offers an open market for certain listed (approved) securities. It is obvious that such loans are more acceptable to banks than where the security is only personal.

(iii) *Discounting of commercial paper.*—Discounting of commercial paper, promissory notes, and bills of exchange is the most acceptable form of investment for banks. The risk is comparatively small, since such loans are advanced against paper which originates in the buying and selling of actual goods. *A* sells goods to *B* and usually draws a bill on *B*, for which a bank pays cash to him and ultimately recovers the amount from *B*, who in the meanwhile has sold the goods and is in a position to meet his liability. The security therefore is tangible and substantial. Such paper is discounted or purchased by the bank at its face value less interest on the principal at the current rate till the time when the bill falls due. Such commercial paper is usually short-term paper, ordinarily running for periods not exceeding three months, and as such

¹ See §§3-5. ² Agger, op. cit., pp. 44, 48; and Seligman, op. cit., pp. 506-10.

is very welcome to commercial banks who cannot afford to invest their funds (mainly drawn from short-term deposits) for long periods.

(iv) *Overdraft*.—This form of loan arises when a depositor is allowed to draw by cheque beyond the deposit amount to his credit at the bank up to a certain stated limit, security being generally required in the case of large amounts.

(v) *Cash credit*.—‘This consists of an open credit or drawing account granted by the bank to someone vouched for by at least two ‘cautioners’ or sureties’ (Seligman). The customer draws on the bank in small instalments and *pays interest on the amount actually drawn*. This type of loan suits small merchants, farmers and artisans. The system of cash credit is best developed in Scotland, and is also extensively used in India.

(vi) *Bank loans according to conditions of payment*.—(a) ‘*Call*’ loans,¹ as well as loans for very short periods—‘money at short notice’ (7 days)—are advanced to bill brokers and stock brokers. ‘*Call*’ or Demand loans are repayable at the option of the bank as well as at the option of the borrower at any time. (b) *Short-term loans* mature within thirty, sixty or ninety days, and enable the bank to have its resources as completely under its control as possible. These are advanced to industry (for current finance) and trade. (c) *Long-term loans* for six months and more are made more frequently by private bankers, trust companies, and investment or industrial banks whose obligations to depositors do not usually call for repayment on demand.

The prudent banker brings about such a combination of these various kinds of loans or assets as will secure for him the largest average rate of interest, without so tying up his funds that they cannot be quickly converted into cash without loss for the purpose of meeting depositors’ claims in normal times and in emergencies.² In other words the banker must aim at the liquidity of his assets in order to maintain the confidence of his depositors.³

§15. The importance of adequate cash reserves and the need for regulation of banks.—The maintenance of sufficient cash reserves is the very ABC of sound banking. The chief danger

¹ On the London money market such loans are referred to as ‘money at call’.

² Banks also invest a part of their working capital in Government, Municipal, Trust and other semi-public securities which can easily be realized in case of emergency.

³ For an excellent study of the distribution of commercial bank assets, see Sayers, *op. cit.*, ch. ix.

to a bank is insolvency arising from failure promptly to honour its obligations, which in the case of a commercial bank are for the most part demand liabilities, i.e. liabilities which must be met as soon as demand is made. It is, however, the experience of most countries that banks learn this salutary lesson only after a reckless disregard of it has actually caused a series of disasters. Often they cannot resist the temptation of trying to earn high dividends for their shareholders by making large and risky investments at the cost of safety. The progress of banking largely depends upon public confidence, which is a plant of slow growth. Unfortunately, in a time of crisis the public do not discriminate between a sound bank and an unsound one. One bank failure may be sufficient to create a widespread panic and bring a large number of banks into trouble by causing a general run on them. The sins of one badly managed bank are thus visited on the heads of the good banks. Particular care is, therefore, necessary to secure prudent and cautious management. It may also further be argued that banking is really a kind of public trust in the management of which anything like profiteering should be discouraged. On these grounds is based the case for the regulation of banks. One important method of regulation that is suggested is to impose an obligation upon banks to hold a certain minimum proportionate cash reserve as in the case of the American National and Federal Reserve Banks and recently (1936) in the case of the Indian Joint Stock Banks. Other regulations lay down that loans should be granted only for certain specific purposes and only on certain conditions regarding the nature of security, specify the maximum period for which loans may be advanced, and insist on publicity of accounts and periodical inspection as further safeguards.¹ The principal argument in favour of 'free' banking is the importance of elasticity in the supply of money and credit, the need for which is liable to considerable variations particularly in agricultural communities. Moreover, a statutory minimum reserve would in practice tend to be the maximum reserve and would lessen the sense of responsibility of directors and managers. This would also be the result of other restrictions. The general feeling, however, is that regulation of this type is on the whole useful and desirable. Latterly there has been in evidence a tendency to bring banking under greater State control, as in the U.S.A., and there is even a movement for nationalization or socialization of banking, for instance in the United King-

¹ The Reserve Bank of India has recently (1939) put forward proposals for a Comprehensive Bank Act to ensure better regulation of banks in India.

dom.¹ The need for regulation of banks and for prescribing a statutory minimum reserve is all the greater in a country like India where modern banking is still in its infancy. It is not easy to determine the minimum reserve, although an orthodox banking maxim prescribes thirty-three per cent as the minimum 'apprehension reserve', any lessening of which would create doubt in the public mind regarding the solvency of the bank. Each country must make up its mind regarding the percentage appropriate to its own conditions, and the conditions may differ not only as between one country and another but also as between different localities of the same country.² The experience of bankers is obviously a valuable guide in this connexion.

§16. Issue of bank notes.—We have already explained the character of bank notes³ and pointed out that though in the earlier stages of modern banking development the issue of bank notes was considered indispensable for the growth of banking, the rapid development of deposit banking and the preference of the business community for deposit credits made the issue of bank notes less necessary. So also a better appreciation of the necessity of regulating the issue of bank notes resulted in the curtailment of the right of issue, which was at first entirely free. Free competition among banks in the matter of note issue came to be looked upon as undesirable, as leading to the evils of diversity and multiplicity of notes and to the abuses of overissue. A virtual monopoly of issue in favour of either a State bank (as in Russia and Finland) or of a private bank (as in England, France, Germany and India) is now the system adopted in most countries. Even in the U.S.A., where a number of banks were at one time allowed to issue notes, the right is now being centralized in the hands of a dozen banks, called Federal Reserve Banks, by the Federal Reserve Act of 1913.

§17. Regulation of note issue: Currency School and Banking School.—The unsatisfactory position of English currency about the middle of the nineteenth century and the numerous failures among banks and business houses made everyone alive to the necessity of regulating the issue of bank notes in the interests of the public. But widely different opinions were held as to the best method of doing so. The Currency School and the Banking School represented two extreme views on this matter,

¹ For a lucid analysis of the main issues raised by the nationalization of banking, see Sayers, *op. cit.*, pp. 304-11.

² The customary standards of liquidity maintained by English banks are two: (i) a cash ratio of about 9 per cent of deposits and (ii) liquid assets (Money at Call and Short Notice, and Bills of Exchange) of about 30 per cent of total deposits.

³ See ch. x, §21.

and before the passing of the Bank Charter Act of 1844, a great controversy raged between these two schools.

The Currency School held that a bank note should be regarded as a bullion certificate and should be issued only against a backing of gold to the full value of the note or, at any rate, of a very large holding of gold, the fiduciary or uncovered issue being strictly limited. If this were not done, there would be an overissue of bank notes with all its resultant evils. In the view of the Currency School, a bank note was to be regarded as a substitute for metallic currency rather than as a pure credit instrument. It is obvious that this ultra-cautious policy would ensure safety, but only at the cost of elasticity and economy, making it most difficult to expand the note issue to meet an emergency. To insist on a hundred per cent reserve is expensive and unnecessary.

The Banking School, on the other hand, held that the question of gold reserves should be left to the discretion of the banks themselves. In their own interest they would avoid an overissue of notes. Even if there were by any chance an excess beyond trade requirements, this would soon be returned to the banks. Large gold reserves were therefore not necessary to secure the convertibility of the notes.

The principal merit of the banking theory is that it provides for elasticity and economy in note issue. On the other hand, human nature being what it is, we cannot entirely depend upon the banks and their sense of responsibility. Complete freedom in this matter would result in speculative transactions being financed by an uncontrolled issue of notes. Moreover, a considerable overissue of notes may occur without anyone being aware of it for a long time. It was precisely because all these evils had manifested themselves on an alarming scale under the old system—which left matters entirely to the discretion of the bankers—that there was a general outcry against the continuance of a *laissez-faire* policy. It is thus not surprising that the Currency School triumphed ultimately and its recommendations were incorporated in the Bank Charter Act of 1844. This is not to say, however, that the Currency School did not err on the side of excessive caution. The best policy really lies midway between the positions adopted by the advocates of these two rival principles, and its aim should be to combine safety and stability with elasticity and economy.

§18 Principal methods of regulating note issue.—Four principal methods of regulating note issue may be distinguished.

(i) *The fixed fiduciary issue system* which was adopted

by England under the Bank Charter Act of 1844 and retained under the Currency and Bank Notes Act of 1928. The Bank of England is authorized to issue its own notes against securities to an amount fixed by statute. This authorized fiduciary issue was originally fixed at £14,000,000, which represented the original debt of the British Treasury to the Bank of England. When the right of note issue enjoyed by the country banks lapsed, a proportion of their right to issue notes devolved upon the Bank of England. In this manner the fiduciary issue rose to £19,750,000 in 1923. This was the maximum allowed by the Charter Act of 1844. The limit was fixed at £260,000,000 under the Currency and Bank Notes Act of 1928, which also amalgamated the Treasury Notes issued by the British Government during the war of 1914-18 with the Bank of England notes, the Bank being made responsible for the payment of this amalgamated issue. The limit was raised again in 1931 to £275,000,000.

Until the virtual dissociation of note issue from the gold reserve effected at the beginning of the present war (see below), any additional notes over and above this fixed fiduciary limit had to be secured by a gold backing of 100%. The Act of 1844 required the separation of the business of note issue and of banking into two separate departments—the Issue Department and the Banking Department. The Issue Department dealt exclusively with the issue and redemption of notes and held the gold reserves as well as the fiduciary reserve. The Banking Department was concerned with the discount, credit and banking business generally. Thus not a single note could be issued by the bank except against gold after the fiduciary limit was reached. If, for example, more currency was needed to meet a severe monetary crisis, the only course open was to suspend the Bank Act (as was done in the crises of 1847, 1857 and 1866), thus enabling the bank to increase its fiduciary issue of notes. The violation of the Act had to be condoned by obtaining a subsequent indemnity from Parliament. This gave rise to the gibe that the Bank Charter Act of 1844 became useful only when it was suspended! There can be no doubt that under the Act of 1844 safety was purchased at the expense of elasticity. If the British banking system as a whole worked well in spite of this Act it was because of the rapid development of joint-stock banking and the use of the cheque as the chief medium of exchange.

While the Act of 1928 retained the principle of maximum fiduciary note issue, it made the clumsy procedure of suspension unnecessary by authorizing the Treasury to allow the

bank to exceed the limit of £260,000,000. The sanction so given, however, was to be communicated to Parliament, and the permission was restricted to a period of six months, which could however be extended for a further period of six months. The British note issue was thus made somewhat more elastic in times of emergency. But as far as the normal expansion of trade and business was concerned, the cheque system continued to be as indispensable as before the war of 1914-18.¹

The present war has brought about further far-reaching changes in the British note-issue system. Even before the war, by an Act passed in February 1939, the fiduciary issue was raised to £300,000,000 and provision was made for weekly valuation at current prices of gold held in the Issue Department. Thus revaluation of the gold reserves came in handy at the beginning of the war when the increased demand for cash was met by expanding the note issue against increase in the value of gold. The most drastic change was effected by legislation in September 1939, when all but a nominal amount of the Bank of England's gold reserve (£280 millions) was transferred to the Exchange Equalization Account and the Bank's fiduciary issue covered by Government securities was raised by this amount to a total of £580 millions. Thus the whole note issue has now become fiduciary and as a result of further increases stood, in July 1942, at £880 millions.²

(ii) *Proportional reserve system.*—This is the system now prevalent in the continent of Europe, the U.S.A. (under the Federal Reserve System of 1913), South Africa and India. Under this system, the notes are secured by a *minimum percentage* of gold and gold securities laid down by statute. This percentage is 40% under the Federal Reserve System in Germany, in South Africa and India, and 35% in France. These minima may however be disregarded for short periods with the consent of the Government on condition that the issuing bank pays a tax reckoned on the amount of the deficiency, the rate of the tax being made to rise steeply as the deficiency rises. All these precautions are intended to discourage excessive issue of notes. The principal merit of the proportional reserve system is that it is elastic. The expansion and contraction do not take place at the same rate as increase or decrease of the gold reserve, as in the case of the fixed fiduciary issue,

¹ Before 1920, the principle of a fixed fiduciary reserve underlying the Bank Charter Act of 1844 was adopted in India, when Government paper currency was introduced in 1861.

² See *World Economic Survey* (1939-41) and *Federal Reserve Bulletin* (October 1942).

but at a greater rate. Thus suppose the proportion of the gold reserve is 40%, then for every increase of 40 in the gold reserve, the permissible expansion of note issue will be 100. Similarly a contraction of the gold reserve by 40 will cause contraction of note issue by 100 : expansion as well as contraction are much more substantial than under the fixed fiduciary system. The violent contraction of currency is regarded as its demerit. Usually the Central Banks working under this system maintain a reserve ratio far above the legal minimum, particularly because once the exact legal minimum percentage is reached not a single note can be cashed without breaking the law. Of course, as indicated above, the law regarding the minimum reserve may be temporarily suspended under certain circumstances.

The Hilton-Young Currency Commission of 1925-6 recommended this system for India, and it has accordingly been embodied in the Reserve Bank of India Act of 1934, which prescribes that the assets of the Issue Department of the Bank shall consist of not less than two-fifths of gold coin and bullion (which must be at least Rs. 40 crores in value) or sterling securities. Sterling securities, which have greatly increased in value during the present war as cover for notes, are included in the 40% reserve against note issue as a support to the external value of the rupee which is linked to sterling at 1s. 6d. under the present Sterling Exchange Standard in India.

(iii) *Maximum issue*.—Under this system, the maximum amount of notes that may be issued by the Central Bank is prescribed by law. This was the French system before 1928, the maximum originally fixed being 350,000,000 francs. This maximum was raised several times, particularly during the war. Except for this restriction the Bank of France was allowed complete discretion and no reserve was made compulsory by law. The French system was the nearest approach in theory to the banking principle, although in practice the Bank of France held superlatively large cash reserves. The French system reversed what is commonly regarded as the sound principle of regulation, namely, allowing freedom as regards the *total* amount of notes, but restricting *fiduciary* issue by requiring a minimum reserve of gold to be held. It has been supplanted in France since 1928 (with the restoration of the Gold Standard) by the proportional reserve system, a 35% gold reserve being now prescribed by law.

(iv) *The bond (security) deposit system*.—This was the system of regulation of note issue which operated in the United States before the passing of the Federal Reserve Act of 1913.

The National Banks were given the privilege of note issue (there being several thousands of them) subject, to the following conditions: they could issue notes only against the deposit of U.S.A. bonds with the Treasury; they were required to keep a 5% cash reserve in the same Treasury as a Redemption Fund and to pay a tax of $\frac{1}{2}\%$ on the value of the notes issued; they were not to issue notes in excess of their capital. This system made the note issue rigid by making it dependent upon the price of bonds and their supply. At the same time the note issue remained decentralized, i.e. in the hands of a large number of banks scattered up and down the country.

The Federal Reserve Act of 1913 contemplated the eventual replacement of National Bank notes by the Federal Reserve Bank notes. This Act established twelve regional Federal Reserve Banks in the principal towns federated under the control of a Federal Reserve Board of seven members appointed by the President. The Board, which was vested with control over all the fundamental central banking operations, could authorize the Reserve Banks to issue notes called Federal Reserve Notes which were made by law the obligation of the United States and were redeemable at the United States Treasury at the holder's option. These banks had to deposit with the Board commercial paper as security against the notes, and themselves to keep a reserve of 40% in gold, which could be reduced on payment of a graduated tax on the deficiency. This new note issue was expected to provide for the seasonal demand for currency and to be useful in meeting a crisis. Thus the American banking system has largely come into line with the centralized banking systems in European countries. Of course there is not one single central bank, but a dozen. This is partly due to the jealousy of the Federal Government and the operations of New York financiers and partly to the large size of the country.¹

§19 Central banking problems.—This leads us to one of the most discussed questions of the day—the question of central banking. The International Financial Conference, which met at Brussels in 1920, passed a resolution that in countries where there is no Central Bank of Issue, one should be established. Underlying this resolution is the idea that there is a close connexion between the maintenance of financial stability and a central banking organization. It is also the business of central banks to promote the general monetary policy of the State. Already before the war of 1914-18 several European countries

¹ For the Indian paper currency system, see *Elements of Indian Economics*, ch. vi.

had developed a strong central system, as in England, France, Germany and Switzerland. The United States, the home of decentralized banking, adopted the new system under the Federal Reserve Act of 1913. During the post-war period (1919-39) several new Central Banks were established in countries that previously formed part of the Austrian and Russian empires, in certain of the Balkan countries, in Central and South American States and in South Africa, New Zealand and Canada,¹ and India has recently (April 1935) established a Reserve Bank. There is no uniformity regarding their constitution. Some are private banks as in Britain, America, France and India, while some are State banks as in Russia and Finland. It is, however, generally thought desirable to keep Central Banks free from political influence. 'The "independence" of Central Banks became a canon of orthodoxy . . . but more recently there has been spreading a realization that the State has, and must be prepared to assert, ultimate control of the actions of its Central Bank. How far this tendency could go without the Central Banks becoming the mere tools of im-provident public finance is a matter of opinion.'²

§20. Functions of Central Banks.—(i) The Central Bank is mainly a *bankers' bank*. It offers rediscounting facilities or makes short-term advances against approved securities to its member-banks³ and thus makes credit available to them. In some countries it also serves as the custodian of the country's banking reserves, the smaller member-banks—either as a matter of convention as in England or as a matter of law as in the U.S.A. or India—keeping a certain percentage of their deposits with the Central Bank which thus obtains some control over the cash reserves in the banking system and over the power of commercial banks to issue credits against them. Thus the latter is distinct from the ordinary commercial banks and its policy is directed not so much to making profits and maintaining its own solvency, as to regulating the credit machinery and maintaining the solvency of the banking system as a whole by functioning as the lender of last resort. For these reasons Central Banks do not usually allow interest on deposits and avoid direct dealings with the public in order to escape competition with commercial banks.

(ii) *Bankers to the Government.*—Central Banks usually

¹ See C. H. Kisch and W. A. Elkin, *Central Banks*, p. 2.

² Sayers, *op. cit.*, p. 72.

³ These are called scheduled banks, i.e. those banks having a paid-up capital and reserve of Rs. 5 lakhs and over, whose names are included in the second schedule to the Reserve Bank of India Act.

act as bankers to Governments. The receipt of revenue, Government disbursements and borrowing operations, all being conducted on a large scale, influence the money market and the business affairs of a country. Until 1935 the Indian Government conducted important foreign exchange operations in connexion with the remittance of Home charges. It is most desirable that one and the same authority should control the banking transactions on behalf of the Government as well as the money market in general. The Reserve Bank of India now has to do this and control both currency and credit.

(iii) *Note issue and regulation of credit.*—Since the Central Bank has to supply the market with cash or take bills or securities off its hands, it is very desirable that it should have the monopoly of note issue. We have already examined the principal methods of regulation of note issue and seen that notes are issued against gold (or silver), Government securities or commercial bills. The withdrawal of notes, resulting in the contraction of currency, is effected by the sale of these assets in the reserve. The principal legal tender currency today in countries like England is the bank note.

(iv) *Stability of foreign exchanges.*—The Central Bank is also responsible for maintaining the stability of the external value of the currency unit. It has to arrange to buy or sell foreign exchange or gold so as to control directly the exchange rates or change its bank rate (see §22 below) so as to produce an indirect effect on the rates of foreign exchange. We have already considered the obligations of the Central Bank in relation to the external stability of the currency unit under the gold standard and other types of monetary standards.¹

(v) *Internal stability.*—One of the recognized functions of a Central Bank today is to keep the internal price level stable by a proper regulation of the volume of currency and credit, and we have already stressed the importance of this function.²

(vi) *Other miscellaneous functions* relate to the provision of credit facilities to agriculture, trade and industry. These tasks are usually not performed directly by the Central Bank but through the member-banks.

§21. **Weapons of the Central Bank.**—Apart from indirect influence over member-banks through 'moral persuasion' the principal weapons in the hands of the Central Bank for adjusting its credit policy in relation to its great responsibilities are (i) appropriate changes in its official rate of discount (bank rate), and (ii) open-market operations and (iii) alteration in the reserve ratios of member-banks.

¹ See ch. x.

² *Ibid.*, §35.

§22. Bank rate policy.—In the period before the war of 1914-18 the bank rate was the primary instrument for credit and monetary control. Its operation may be thus explained. A Central Bank is liable to meet both external and internal drains on its reserve, and seeks to protect its reserve by raising its official rate for the discounting of bills. A rise in the bank rate is followed by other banks raising their rate of discount also, so that there is a decrease in the volume of bills presented for discount and of fresh loans. A rise in the discount rate is also followed by a rise in the rates of interest on deposits, and a consequent increase in saving and decrease in spending. A high rate in the money market induces temporary investment of floating funds from abroad and thus may cause an inflow of gold. The prices of stocks and shares fall, as they are offered for sale in increasing quantity either to meet demand for payment or for transferring the proceeds to the more profitable discount market. Speculation is discouraged, profit margins being lowered by the rise in the bank rate. The general effect of a rise in the bank rate is to lower prices by restricting the volume of credit, by stimulating deposits of cash, and by forcing realization of goods and stocks. (See also §23 below.) This general fall in prices encourages exports (since foreigners are tempted to make purchases in a cheap market) and discourages imports (since it is not profitable to sell in a falling market). In the case of a country like England, occupying a strong position in the international short-term loan market, the raising of the bank rate is very effective in preventing the outflow of gold by checking the volume of fresh loans granted to foreigners.

The lowering of the bank rate has opposite effects. It leads to a fall in the market rate, lowers the deposit rate, increases borrowing, raises the prices of commodities and securities, encourages the transfer of foreign balances abroad, contracts the exports and expands the imports. A low bank rate generally creates easy money conditions and is made possible by a plentiful supply of money.

§23. Hawtrey and Keynes on bank-rate changes.¹—We may briefly indicate here the two main lines of thought as to how the bank-rate weapon works and influences prices and production. According to Hawtrey, it is the short-term rate of interest which directly determines dealers' activities. When the bank rate is raised the cost of holding stocks of finished or

¹ See J. M. Keynes, *A Treatise on Money*, vol. 1, pp. 185-209; R. G. Hawtrey, *Currency and Credit*; Sayers, *op. cit.*, pp. 146-64; Crowther, *op. cit.*, pp. 204-12; and Briggs and Jordan, *op. cit.*, pp. 642-5.

semi-finished goods increases, dealers reduce stocks and curtail their orders with producers, who thus find a decline in sales. Prices are cut and output is diminished. The volume of employment offered to factors of production declines and money incomes contract, thus setting in motion the vicious circle of deflation. Capital goods trades are also in due course adversely affected. The opposite results are produced by a fall in the short-term rate of interest. The cost of holding goods falls, dealers are encouraged to increase stocks and place more orders with entrepreneurs, production expands, prices rise and employment increases, all giving rise to the vicious circle of inflation.

The main criticism of the Hawtrey theory is that it over-emphasizes the part played by interest-payment, which is only one factor in the total cost of holding goods, so that the effect of a rise or fall in the bank rate must necessarily be small. At the same time, as Sayers points out, 'the process once initiated is cumulative, and substantial results may well follow from small beginnings'.

The other line of thought is the Keynesian view, adopted by the Macmillan Committee of 1929-31, that the main effect of bank-rate changes on the internal economic situation comes through the change in long-term rates of interest, which always seem to be associated with changes in the short-term rate of interest. A rise in the short-term rate of interest relatively to the yield in long-term securities, leads to a sale of such securities in order to reduce indebtedness to banks. At the same time persons with surplus funds to invest tend to keep back some of these funds in the form of deposits rather than invest them in securities. As the prices of long-term securities are thus depressed their yield relatively rises. As Sayers observes, since the yield on old securities must be rivalled by any one wanting to borrow for a long term, the effective long-term rate of interest has risen. Thus the movements in the rate of interest in the short- and long-term market tend to move together sympathetically.

A change in the long-term interest rate affects the willingness of producers to hold stocks of capital goods in the same way that a movement in the short-term rate affects the willingness of dealers to hold stocks of finished and semi-finished goods. The higher the rate of interest the less attractive becomes capital investment, and the lower the rate of interest the more likely is the entrepreneur to decide that the capital extension and replacement is worth undertaking. A rise or fall in the long-term rate will produce a sequence of events

in the capital goods industries similar to that in respect of the finished and intermediate goods in the Hawtrey theory. Thus when the long-term interest rate rises, other things being the same, there is a curtailment of capital extension, a decline in employment in the capital goods trades, shrinkage of total money incomes and a fall in prices. Consumers adapt themselves to this shrinkage partly by saving less and partly by curtailing expenditure on current consumption. A fall in the long term of interest leads to opposite results, namely increased employment in capital goods trades, higher money incomes, increased savings and expenditure on consumers' goods, rising prices, all leading to an inflationary expansionist movement.

The efficacy of the long-term rate of interest depends on the elasticity of demand for capital. Experience has shown that the state of trade responds but painfully to dear and cheap money conditions. So wide is the margin of error in his estimates that a fractional rise in the rate of interest is not likely to deter an entrepreneur from investment in a boom period; and vice versa, a fractional fall in the rate of interest is not likely to act as a sufficient inducement to him to revive business activity. The more decisive factor at such a time is the general frame of mind about the future.¹ In any case, in so far as the bank rate is effective in producing changes in the price-and-money-income structure it does so in a roundabout, clumsy and disturbed way, often involving considerable social injustice.

It will be seen that both Hawtrey and Keynes have the same starting-point and both see banking policy as effective because it influences the cost of holding goods. The main difference between the two views is that while Hawtrey concentrates on the short-term rate of interest and its effects on dealers' activities regarding finished and semi-finished goods, Keynes emphasizes the part played by the long-term interest in influencing entrepreneurial activity in relation to capital goods. As Sayers observes, 'these two explanations of the effects of banking policy upon the prices and production are not mutually exclusive: a fall in the short-term rates may well *both* stimulate additions to stocks *and* lead to a fall in long-term rates which will stimulate investment in fixed capital. The difference is one of emphasis only.'

§24. Open-market operations.—Either as an alternative to changing the bank rate or as a supplementary measure to make the bank rate policy more effective, a Central Bank may con-

¹ See ch. viii for the part played by the psychological factor in producing cyclical fluctuations in trade.

duct what are called open-market operations. These consist in the Central Bank *directly* (i.e. over the heads of member-banks) selling and buying securities, bills and Government stock in the open market. Thus if it desires to create tight money conditions and check speculation, it will sell securities to the public for cash and thus decrease its supply in the market and the cash reserves of member-banks, forcing the latter to curtail the volume of credit issued by them. If on the other hand the Central Bank wishes to encourage easy money conditions, it will buy securities from the public and thus expand currency and credit and put additional funds into the market, thereby increasing the cash reserves of member-banks and enabling them to expand the volume of credit issued by them. The Reserve Bank of India has been equipped with the power of conducting such open-market operations.¹ The technique of open-market operations is a post-last-war development and although it has its own limitations, it is considered to be a more suitable weapon than the classical instrument of bank rate changes, which are often slow in their working and rather unsettling in their character so far as the economic system is concerned. Even when the bank rate weapon is used, it can be made more effective by being reinforced by open-market operations.

Both these weapons of Central Banks, namely variations of the bank rate and open-market operations, are less effective in inducing expansion of credit during a time of deflation than in bringing about a contraction of credit during inflation. The expansion of bank credit depends not only on easy money conditions, but also on business confidence. Business men cannot be coaxed into borrowing merely by cheap money conditions. As the common proverb goes, you can take a horse to a river, but you cannot make it drink. It is therefore considered necessary for the State to come forward with a large programme of capital expenditure on public works during a slump with a view to stimulating employment and reviving business confidence and, eventually, private enterprise.²

§25. Alteration in the reserve ratios of member-banks.—This is the third weapon of credit control available to Central Banks. By varying the ratios of reserves to deposits which the member-banks must observe, the Central Bank can expand credit by

¹ See *Elements of Indian Economics*, ch. vi.

² See also ch. xviii for a detailed study of the credit policy of Central Banks; see *Report of the Macmillan Committee*, pp. 95-9 and 152-5; Sayers, *op. cit.*, pp. 94-117; Crowther, *op. cit.*, pp. 190-200; and E. M. Bernstein, *Money and the Economic System*, pp. 348-55

lowering the ratios and contract credit by raising them. The use of this power was advocated by Keynes and the Macmillan Committee.¹ The Federal Reserve Board of the U.S.A. was given the power to change the required reserve ratio in 1933, acting with the approval of the President during an emergency, and exercised the power in 1936 and again in 1937 to check unwanted expansion of credit. Such power of control is obviously of assistance to the Central Bank.²

§26. **The Bank for International Settlements.**—Since the war of 1914-18 the need for co-operation among the leading Central Banks of the world regarding monetary policy has been increasingly felt. Such a policy is likely to be easier since the establishment in 1930 of the Bank for International Settlements at Basel (under the famous Young Plan) to control the German Reparations payments. It is, however, contemplated by its statutes that this bank should develop into a *Central Bank for the Central Banks* of the world. The relations between the Bank for International Settlements and the Central Banks are reciprocal. For example, the former may hold the gold deposits of the latter and vice versa. It remains to be seen how far the idea will work. The failure of the World Economic and Monetary Conference of 1933, the division of countries into various monetary groups since 1936³ and the deterioration of international relations which has culminated in the present war do not seem to justify any high hopes of international co-operation in the near future. Nevertheless, as indicated before,⁴ post-war reconstruction plans which postulate a high degree of international co-operation in currency and financial matters based on the idea of multilateral clearing are being put forward.

SUMMARY

CREDIT

Many economic transactions in modern civilized societies are based on trust or *credit*. Credit is commonly opposed to cash. Things or rights to things are transferred in exchange for a *promise* to pay in future. There are various forms of credit instruments in use, e.g. promissory notes (including Government currency and bank notes), cheques and bills of exchange. All of them serve to economize the use of the precious metals as money. The cheque system is specially effective in this connexion when associated with clearing-house arrangements for adjusting inter-bank indebtedness. Credit is vital to large-scale transactions in commerce and industry. If properly organized, it discriminates in favour of the more competent business men and

¹ *Report of the Macmillan Committee*, pp. 159-60.

² Crowther, *op. cit.*, p. 202.

³ e.g. the Sterling area, the Gold bloc and the Dollar group.

⁴ Chapter x.

against the less competent. This is to the advantage of the community. So far as credit is used for increasing capital equipment, it may be said to stand for capital. Credit requires careful regulation; otherwise it will give rise to various evils like speculation and over-production.

BANKING

Banks are the principal managers and dispensers of credit. Their credit is mainly based on the deposits which they receive, and may take various forms such as discounting, issuing of notes, and granting loans. Ordinary commercial banks can give only short-term loans.

Industrial banks and land mortgage banks are special types of banking institutions which undertake to provide long-term finance. The tendency towards amalgamation has recently been on the increase in banking, with advantages and dangers similar to those experienced from the formation of trusts and combines in industry.

It may almost be said that branch banking is a corollary of amalgamation. An even distribution of risks and funds is its principal merit. Monopolistic control and neglect of local interests is its principal danger. The unit bank has the merits and demerits of small-scale production. Receiving deposits of various classes, such as current, fixed and savings deposits, is one of the main functions of a commercial bank. Issue of notes is no longer one of the ordinary functions of such a bank.

'Loans create deposits.' This statement has reference to the common practice by which banks lend, i.e. by allowing the borrower to behave like a depositor. If a bank agrees to advance a loan of Rs. 10,000 to X, it usually does this by crediting the amount to the account of X, who can thereafter draw upon it by means of cheques like any ordinary depositor. There are three main limitations to the creation of bank money: the need (i) for maintaining a suitable or legal reserve ratio, (ii) for a valuable security for the grant of bank credits, and (iii) for the payment of interest on the issue of such credits.

To suit different needs banks advance loans in different ways (e.g. loans on collateral security, discounting of commercial paper, overdrafts, cash credit). The prudent banker combines these different methods of investing his funds in such a manner as to secure the largest profit on his transactions while at the same time maintaining himself in a state of preparedness for meeting all reasonably calculable emergencies. Liquidity of assets is essential for maintaining the solvency of a bank and the confidence of depositors.

The effects of recklessness or bad management in one bank often spread far and wide, inflicting injury even on other sound banks, as well as on society in general. Different methods of regulating banks have therefore come into use (e.g. laying down a minimum proportion of cash reserves, restriction of loans to specified purposes, publicity of accounts, periodical inspection).

The issue of bank notes is nowadays a function of a State bank or a private bank closely associated with and controlled by the State.

For preventing the evil of an overissue of notes, some restriction on the power of issuing notes is necessary. But the restriction should not be so great as to make the system too rigid. The Bank Charter Act of 1844, which in its amended form regulated note issue in England until the present war, erred on the side of excessive caution. It required that all addition to notes

beyond a fixed fiduciary limit should be fully backed by gold. The war has been responsible for the drastic dissociation of note issue from gold, and almost the entire note issue has now become fiduciary. The proportional reserve system, as opposed to the fixed fiduciary reserve system, makes the supply of notes more elastic. It has, however, defects of its own.

The need for the establishment of *Central Banks* in the principal countries of the world is now generally recognized in order to secure financial stability. Central Banks are described as bankers' banks. They are expected to supply the credit needs of the other banks, they are the custodians of the country's banking reserves, and they see to it that these reserves do not get unduly depleted. Their policy is guided by national considerations rather than considerations of profit. They perform various banking and agency functions for Governments, and they are generally assigned the function of note issue to make their control over currency and credit effective. One of the important aims of central banking policy is to secure internal stability of prices by a regulation of the volume of currency and credit. The principal weapons in the hands of a Central Bank for carrying out its responsibilities are (i) the *bank rate policy*, (ii) *open-market operations* and (iii) *alteration in the reserve ratios of member-banks*. Through a high bank rate, money is rendered scarce in the market, and abundant through a low bank rate. The same ends are also achieved by the Central Bank through open-market operations, i.e. through the sale or purchase of securities: the former serves to draw off funds from the market, and the latter to put more funds into the money market. By altering the reserve ratios of member banks the Central Bank can bring pressure on them to contract or expand credit. All these weapons of credit control have their practical limitations.

The effect of bank-rate changes on internal economic activity (prices and production) has been interpreted in two different ways which are fundamentally inter-connected, viz. the Hawtrey line of thought based on short term rates of interest affecting dealer's activities and the Keynesian theory resting on long term rates of interest affecting entrepreneurial activities.

The *Bank for International Settlements* is a kind of Central Bank for the Central Banks and is intended to facilitate international co-operation in monetary and financial matters.

XII

EXCHANGE: INTERNATIONAL TRADE

§1. International trade compared with domestic trade.—International exchange, it might be urged, is in its essence not different from the domestic exchanges which take place within a nation. Although we have got into the habit of talking of India's trade with England or Germany's trade with Russia, and so on, the bargains are not normally between one country as a whole and another, but between one individual or firm in a country with another individual or firm in a foreign country. The parties, no doubt, do not belong to the same country, but this does not alter the fact that the principles underlying the exchange are fundamentally the same as if it had occurred between people living in the same country. Both the parties to the exchange enter into it voluntarily and each believes that on the whole he gains by it. Otherwise, why should he enter into the transaction at all?

There are, however, certain features which distinguish international from domestic trade. The most important difference is that the forces of supply and demand do not operate so freely in determining international as in determining internal exchange.

Within any given country labour moves from place to place with comparative ease, and this movement helps to bring about a certain uniformity in the level of wages throughout the country. But people do not move so freely from one country to another.¹ In order to take advantage of higher wages, it would be most unusual if an Indian labourer, for instance, were to transfer himself to South America. Various things come in the way of such free movement—attachment to one's own country, difficulties of language, differences as regards legal practice and as regards social and political customs and institutions. What holds good of labour also applies to capital, though in a smaller degree.² The habit of investing abroad has grown in recent times. But even now people generally prefer to invest their money in their own country and require a special inducement to invest it abroad. The result is that considerable differences may persist in profits earned by capital as between one country and another. Within the same country, on the other hand, profits tend to approximate to the same level from place to place, and from industry to industry.

¹ See ch. vi, §8.

² See ch. vii, §11.

Again, trade between different countries is hampered by the existence of import duties, whereas normally we do not have to pay a duty when we send commodities from one place to another within the same country.

Another complication is that different currency systems prevail in the different countries. Payments in connexion with international trade involve the conversion of one currency into another, and give rise to the special set of problems dealt with under Foreign Exchanges.¹ But the principal characteristic which makes it necessary to treat international exchange separately is the immobility of capital and labour between different countries. It may indeed happen sometimes that within the same country there may be parts of it between which there is no free flow of capital and labour. When this is the case, *economically speaking* the trade between such parts is to be explained in terms of international trade. Similarly it may happen that two countries which are politically independent may develop a system of absolutely unhampered trade and there may be none of the usual barriers—political, social, legal or linguistic—impeding the free movement of labour and capital. In this case the trade between the two countries is of the nature of internal rather than international exchange. Nations are economically foreign to one another only in proportion as hindrances exist to the free passage of capital and labour from one to the other.

§2. Theory of comparative costs.—Suppose there are two countries *A* and *B*. In *A*, one unit of capital and labour (productive power) will make, let us say, $10x$ or $20y$. Let us suppose that in *B*, one unit of productive power will make $10x$ or $15y$. Then if each country devotes one unit of productive power to each of the commodities x and y , the total product will be $20x$ and $35y$ ($10x + 20y$ in *A* plus $10x + 15y$ in *B* = $20x + 35y$). But if each is to devote its efforts to the production of that commodity in which it has the greatest relative advantage, then *A* will devote its two units of productive power to the making of y , and *B* will devote two units of productive power to the making of x . The total combined product in this case will be $20x + 40y$, i.e. $5y$ more than before. It is therefore advantageous for both *A* and *B* that *A* should make only y and *B* should make only x , and that *A* should exchange some of its y for some of *B*'s x . The balance of advantage that emerges from this international exchange is, as we saw, $5y$ in our example. But we have yet to answer an important question. How is this $5y$ divided between *A* and *B*? The answer is

¹ §§18-20.

that the division will be in proportion to the *intensity of reciprocal demand*. In other words, it will become a question whether *B*'s need for *y* is greater than *A*'s need for *x*. If it is greater, then *A* will benefit more than *B* from this specialization in production followed by international exchange. Clearly, however, the terms of exchange would not go beyond what each country can do by itself. For instance, taking the figures in the above example, *A* will not consent to part with more than $2y$ for $1x$. Because if necessary it can itself make $1x$ with the capital and labour it requires for making $2y$. *B* in its turn will not consent to receive less than $1\frac{1}{2}y$ in exchange for $1x$. Because with the capital and labour it requires for making $1x$ it can itself make $1\frac{1}{2}y$. The terms of the exchange will thus fluctuate between $1\frac{1}{2}y$ and $2y$ for $1x$. This is what is meant by saying that international values or terms of international exchange are determined according to the principle of *comparative cost*.

It is helpful to regard international trade as a developed form of barter. The exports of a country are the price it has to pay for its imports. Looking at the question in this manner we see at once the fallacy of regarding a decline in exports unfavourably and rejoicing when exports increase. This is one of those false mercantilist notions which appear again and again in popular arguments. A decline in exports is in itself not an evil, unless it causes a decline in imports also. If imports remain the same or increase, while exports decrease, there is nothing to be sorry for. On the contrary, we ought to congratulate ourselves that for our imports we have to pay a smaller price than before in the shape of exports.

§3. Exports pay for imports.—Since international trade is essentially of the nature of barter, it follows that if we import goods (and services) of a certain value from foreign countries we must in the long run export goods (and services) of an equivalent value in payment for our imports.

The words 'in the long run' must be noted carefully. Because some of the international exchanges may be on the basis of credit and since payment is thus often postponed, it is not necessary that at any given time or in any given period there should be an exact correspondence between the value of things imported and the value of things exported. But this gap must eventually be bridged when payment of what is originally bought on credit does take place.

Similarly, when one country, or the inhabitants of one country, grant a loan to another country or its inhabitants, the exports of the former are necessarily greater *for the time* than

its imports, to the extent of the loan. But later on, when the interest and principal of the loan are being paid, this will make the imports of the creditor country greater in value than its exports.

There are a few exceptions to the statement that exports must (sooner or later) balance imports. Some payments may be made from one country into another for which, from the nature of the case, there can be no corresponding tangible return. The following are among the items falling under the category : payments received by students studying abroad, money which tourists take out of their country and spend in countries which they visit, money sent by people residing abroad to their families or friends in their own country, tributes or indemnities exacted by one country from another (such as Germany is now exacting from occupied Europe).

Of the goods and services exchanged between people of different countries, not all are officially recorded. If therefore we relied only on what is officially recorded (i.e. 'visible' exports and imports) we should be omitting many items of actual export and import. We should be omitting the 'invisible' exports and imports. In order to prepare a complete balance sheet in respect of a country's transactions with the outside world, we must supplement the official records by the best estimates we can obtain of the so-called 'invisible' items. By 'invisible' we simply mean 'not officially recorded'.

The following list will give an idea of the many factors which enter into a complete balance sheet of international payments : (i) merchandise; (ii) treasure; (iii) business services rendered by one country to another, e.g. transport services (which lead to payments of shipping freights, port dues), banking and financial services, insurance services; (iv) interest on loans advanced by one country to another and profits on capital invested in foreign countries; (v) Governmental expenditure in other countries in respect of diplomatic and consular services, Home charges in the case of India, reparations; (vi) transactions in connexion with the repayment of loans made by one country to another; and (vii) funds brought in by immigrants and returned emigrants, remittances by emigrants, charitable and educational donations sent from one country to another, expenses of tourists, travellers in foreign lands and of students studying abroad.

Of these, some items, e.g. (i) and (ii), are officially recorded and are therefore 'visible', while others like (iii) to (vii) are not recorded and are therefore 'invisible'.

§4. The balance of trade and balance of account (of payments).

—In the light of what has been said above, the distinction between the balance of trade and balance of accounts may now be explained. When we take into consideration only the visible exports and imports, we get the concept of the 'balance of trade'. If the exports exceed the imports, we speak of a favourable balance of trade; and if the imports exceed the exports, we speak of an unfavourable or adverse balance of trade.

But we have already seen that there are besides the *visible* items many *invisible* items—on the credit or the debit side. When we take into account the invisible as well as the visible items we get an idea of the balance of accounts or balance of payments, as distinguished from the balance of trade. It is wrong to suppose that a favourable balance of trade shows that all is well with the country and that an unfavourable balance is always a matter for anxiety. England, for example, has usually an adverse visible trade balance, i.e. her imports exceed her exports, and apparently this indicates that England is a debtor country. But if we go deeper into the matter and allow for her various invisible exports (or credit items) such as her shipping services, the sale of her ships abroad, and the services she performs for foreigners in connexion with banking, insurance, etc., we shall find that the gap between imports and exports is considerably narrowed. We must also remember that part of her imports represents payments in connexion with British capital lent abroad.

The case of India is very different. In normal years, we have a favourable balance of trade.¹ But India is really a debtor country, as can be seen by taking into consideration her various invisible imports (or debit items) such as (i) interest on loans raised abroad; (ii) repayments of loans previously incurred; (iii) remittances abroad by European merchants, lawyers, Government officers in India, etc.; (iv) profits of foreign banks and insurance companies; (v) Home charges, i.e. expenditure on Government account abroad (in England) in connexion with furlough, pay, pensions of officers and stores purchased by the Government of India; and (vi) remittances to Indian students studying abroad.

§5. Advantages of international trade.—(i) International trade enables a country to obtain commodities which it could not produce at all or could produce only with great difficulty. Thus England secures tea, sugar and cotton in this manner. Similarly, any deficiency of the home supply of a commodity (e.g. food grains as in the case of England) can be met by foreign imports.

¹ See *Elements of Indian Economics*, ch v, §18

(ii) It brings about a more efficient employment of the productive forces of the world, since each country employs itself in producing those things in respect of which its capital and labour are relatively most efficient. Thus a country is enabled to obtain many commodities more cheaply than if it were to produce everything itself. The doctrine of comparative cost explains how this advantage is reaped

(iii) International trade enables a country fully to exploit its natural resources which would remain unexploited in the absence of outlets abroad, e.g. jute, raw and manufactured, is produced in India largely for export.

(iv) International trade, by extending the size of the market, and promoting division of labour and rationalization of industry, tends to lower the costs of production.

(v) There are certain cultural and moral advantages which follow from international trade. History proves foreign commerce to have been a great instrument of civilization. The different nations come into constant contact with one another in the course of international trade, and cannot help learning from one another. Certain desirable points of character may also be developed in this manner.

(vi) International trade, according to the classical free trade school represented by Mill, is a principal guarantee of the peace of the world, as international commerce first taught nations to look upon the wealth and prosperity of other nations as the direct source of their own wealth and progress. Unfortunately, this belief was shattered by the war of 1914-18 which seemed to show that foreign commerce emphasizes international rivalries instead of promoting world peace. Nevertheless, there is no doubt that if the habit of taking long-period views becomes more common, people will see more readily the essential truth in Mill's argument. Enlightened opinion is on the side of a maximum development of international exchange. Hence before the present war efforts were made to secure the removal of tariffs, quotas and exchange restrictions, which were seriously restricting international trade

§6. Possible disadvantages of international trade.—(i) International trade may sometimes lead to the sacrifice of the greater interest of the future to the smaller interest of the present. Certain valuable natural resources which may be limited and which require to be tapped economically may be exploited too rapidly and wastefully for purposes of export. As the American economist Carey said, a country which exports mainly raw materials may be said in a sense to export its land itself.

(ii) International trade may make a country dependent

upon other countries and expose it to serious risk if, owing to war or other causes, its trade abroad is cut off. This dependence is a grave matter in the case of essential requisites like food supply and means of defence.¹

(iii) International trade may seriously disturb the distribution of labour and capital in a country, especially when foreign goods are 'dumped' into it at impossibly low prices.

(iv) International trade may often result in the importation of cheap but worthless and even harmful products, the consumer not being always the best judge of his own interests.

(v) Unfettered foreign trade may adversely affect either the agricultural or the manufacturing groups of industries and thus lead to a one-sided development of the economic life of the nation. Thus England has sacrificed her agriculture and India has become predominantly agricultural. A certain degree of diversification of the national industries is to be desired both in the interests of a more stable economic life and its beneficial effects on national character.

On balance, however, we may say without hesitation that the advantages of international trade far outweigh the possible disadvantages and that it is quite feasible to minimize the disadvantages by a suitable regulation of foreign commerce.

§7. Free Trade versus Protection.—Free trade implies freedom of international trade from restrictions. It is not incompatible with the levy of low *revenue* duties either on exports or imports to meet the demands of the national exchequer. Protection, on the other hand, implies a deliberate regulation of foreign trade in order to protect home industries from foreign competition and stimulate their growth. This is usually effected by levying protective import duties, although export duties may also enter into the scheme of protection. Other methods are: (i) grant of a bounty to the home industry on the basis of protection, (ii) fixing of quotas or definite amounts or proportions of the imports of a commodity from a foreign country in relation to home production (as in the case of cotton piece-goods imported into India from Japan before the present war), and (iii) trade agreements or commercial treaties on the basis of reciprocal concessions.

Before the present war, practically the whole world had become strongly protectionist in sentiment as well as in actual commercial policy. Even England, hitherto a passionate adherent of free trade, went over to the protectionist camp. The world was reverting to the old mercantilist policy of the seventeenth and eighteenth centuries, when foreign trade was

¹ See §9 (iii).

subjected to all sorts of restrictions. The growth of strong feelings of economic nationalism, the discredit into which the *laissez-faire* philosophy fell, and the increased scramble among nations for world markets, all resulted in the adoption of a high tariff policy, especially to combat the consequences of currency depreciation in foreign countries, the growth of dumping, and the world economic depression.

§8. Arguments in favour of free trade.—The free traders make no difference between foreign and domestic trade. Their main argument is simply a corollary from the principle of division of labour (in this case international division of labour). In their view free trade is calculated to secure '(i) the greatest mass of goods in the world as a whole, and (ii) the maximum amount of immediate comfort for each consumer'. It ensures the flow of the resources of a country into those channels where they can be employed to the greatest advantage. It thus prevents dissipation of these resources, and their artificial diversion to relatively unprofitable industries which results from protection. The real rewards of both capital and labour tend to be greater under free trade than under protection.

Free traders also hold that tariff wars lead to military wars and thus protection is viewed as a menace to world peace.¹

§9. The case for protection.—(i) *Infant industries argument.*—One of the principal objections to the doctrine of free trade urged by the protectionists is that, while laying emphasis on the well-being of the world as a whole, it tends to throw into the background the idea of the nation as a unit with interests often at variance with those of other nations. A free exchange of goods may be positively harmful to economically backward countries like India, preventing them from ever producing those commodities in respect of which they may have the greatest *potential* advantages. The actual superiority of other countries is often to be attributed merely to the earlier start they have made, and is not always based on superior natural advantages. A country may enjoy very great natural advantages but may be unable to exploit them for lack of skill, experience or capitalistic enterprise, or of well-organized transport and credit, which are essential for modern industrial development. In order that all these deficiencies should be made good, industries may have to be protected from foreign competition, because otherwise they will not be able to make a beginning and continue for a sufficiently long time to develop all the elements of efficiency without which competition on equal terms with foreign goods would be impossible.

¹ See §5 (vi).

All these considerations have gained additional weight from the fact that the competition of established industries in foreign countries has in these modern days become particularly intense owing to the organization of industry in the form of powerful combinations, the recent improvements in transport, low freights, the system of export bounties, etc. The case for providing artificial props to young industries ('the crutches to teach the new manufacturers to walk' as Colbert called protective duties) in industrially backward countries like India, is thus very strong. When these industries develop under the stimulus of protection, the hope is that they will eventually be able to dispense with all artificial aids, and that the loss entailed in the form of high prices to consumers during the initial stages of development, will be more than covered by the ultimate advantage to the nation.

(ii) *Diversification of industry*.—As already mentioned above, the development of varied forms of industry is in itself a desirable goal as it affords a field for the employment of different grades of skill, and exercises a salutary influence on national character. A country with a predominantly agricultural population tends to be on the whole unprogressive and unduly conservative in outlook. Moreover, the economic life of a mainly agricultural country is apt to be excessively unstable, and in a country like India the vagaries of the monsoon make the instability all the greater, exposing the country from time to time to the danger of famines. The possession of diverse industries would make its economic life broad-based and relatively more stable.

(iii) *National self-sufficiency*.—Protection is also advocated on the ground that it can be used for making a country economically self-sufficient, especially in regard to key industries (e.g. steel, iron, food-producing industries) which are indispensable for the prosperity of other industries and national safety. Dependence upon foreign countries in these matters is most undesirable, as the war emphatically shows in the case of both England and India. It should, however, be remembered that economically it is better for all nations to widen the scope of international commerce as far as possible instead of restricting it by protection or otherwise.¹ Self-sufficiency is in itself not the ideally desirable thing that people often take it to be. A hermit nation is not any more worthy of admiration than an individual hermit. Of course, economic considerations have sometimes to yield to other considerations. In the interests of national safety, as argued above, a nation may have

¹ See §5.

to produce certain things itself irrespective of cost instead of following the economically profitable course of buying them from foreign nations. But it is not the part of wisdom for a nation to organize its normal economic life on a war-time basis.

(iv) *Other arguments.*—The policy of protection is also defended by a host of other arguments. Some of these are, however, clearly fallacious, although they are frequently urged. It is, for example, often asserted that protection increases employment. This can be disproved on theoretical grounds, as well as by an appeal to facts. In so far as protection causes a diversion of the nation's energies to production for which it is not fitted by nature, it must lead to a shrinkage of the national dividend, which after all is the ultimate source out of which employment can be provided. For a similar reason it is fallacious to argue that protection raises the scale of wages. This fallacy is often due to failure to distinguish between nominal and real wages. Wages may be nominally high. But prices are also likely to be high in a protectionist country, and the labourers may after all not be better off than in the free trade countries. A judicial and fair-minded examination of the actual conditions in free trade and protectionist countries does not support the notion that protection affords any special security against unemployment or that it guarantees high wages.

§10. **Limitations of protection.**—Protectionists often make light of the sacrifice involved in protective duties, by airily asserting that after all it is the foreigner who pays the duties. This shows deplorable lack of logic. If the home consumer does not bear the burden of the duties, this means that there is no rise in the price of the article taxed. But in this case the protective duty has failed to protect. The whole difficulty of the home producer is that owing to foreign competition he has to fix his prices at a lower level than is profitable. He asks for a protective duty because through it he wishes to compel the foreign producer to quote a higher price.

Protection, if it is discriminate, may ultimately increase the wealth and taxable capacity of the people, and the public revenues may benefit. But protectionists sometimes talk as if this must be the immediate effect of protection, which again is illogical. Because if protection is successful, it must progressively diminish foreign imports, making the yield of the protective duties less and less.

From this discussion it should be clear that great care and caution are necessary in the application of the remedy of protection. If blindly applied it will prop up a host of weak and

feeble industries, misdirecting the flow of a country's capital and labour into unsuitable channels, and by removing the healthy stimulus of foreign competition it will encourage inefficiency in production.

Another great danger connected with protectionism is that of political corruption which may be used by a powerful industry for securing protection for itself, or its continuance even after it has ceased to be necessary. Open public inquiries into claims by the different industries for protection by an impartial tribunal on which all interests—especially those who are going to be hit directly if the protection asked for is granted—may help to mitigate the evil somewhat. But nobody should imagine that the danger is unreal or negligible.

Protection can be legitimately given in certain special circumstances, e.g. for safeguarding a country against dumping. Less commonly it is also advocated for retaliatory purposes for securing the removal or reduction of import duties levied by foreign countries and for regulating foreign trade on a reciprocal basis.

§11. **Dumping.**—People often refer to any kind of severe competition from abroad as dumping. But in its more accepted and technical sense, it means the sale of imported goods at a price lower than the prevailing market price in the country of production or origin. This may be due to accidental over-production or to the deliberate action of strongly monopolized foreign industries. Generally these industries are protected in their own country. They find it advantageous to produce on a large scale in order that their costs may be reduced. But only a limited amount of the total production is sold at very high prices in the sheltered home market, and the rest is disposed of in foreign markets at very low prices. During the period between the two wars, which was specially marked by a scramble among nations for foreign markets, dumping was extensively practised. Currency or exchange depreciation, which temporarily stimulates the exports of a country, has also come into pronouncement as a method deliberately adopted by certain nations in the interests of their export trade. India has recently suffered at the hands of Japan in both these ways.

§12. **Drawbacks of protection.**—The safest approach to protection is to consider it as at best a necessary evil—as a kind of purgatory through which a nation has to pass before reaching the heaven of full industrial development and economic prosperity. Unless it is properly regulated, both as regards the selection of suitable industries to be protected and the rate and period of protection, it will prove unduly costly and will bring

more harm than good. Protection in other words should be *discriminate*.¹

Under certain circumstances a policy of protection may be necessary in spite of its disadvantages. But that it is attended with serious disadvantages must be clearly recognized, so that instead of looking upon it as an unfailing and irreproachable remedy for industrial backwardness, we should accept it with due caution and becoming hesitation.

In the first place, protection will necessarily increase the cost of living and consumers will suffer. Industries which are not protected will also suffer owing to increase of expenses, e.g. wages will tend to be higher because of the increased cost of living. Also the articles receiving protection may be such as are in regular use in other industries. The consideration that protection means increased cost of living should have special weight in India where the average consumer is extremely poor.

FOREIGN EXCHANGES

§13. **Definition.**—By 'foreign exchanges' we understand the system by which the obligations arising out of commerce and other international dealings are discharged and the mechanism by which the money of one country is converted for this purpose into the money of another country through bills of exchange, drafts, etc.

§14. **How is money remitted from one country to another?**—There is no essential difference between the mechanism of internal and international trade except that in international trade the creditor must ultimately be paid in his own money by his foreign debtor.

Let us take a simple illustration. Let us suppose that a Bombay merchant *A* has sold 100 bales of cotton of the aggregate value of Rs. 10,000 valued at £750 at the current rate of exchange (1s. 6d. per rupee, i.e. £1=Rs. 13-5-4) to a merchant in London, *B*. Similarly, let us assume that another London merchant *C* has shipped cotton piece-goods of the same value (£750) to a Bombay merchant *D*. Now it is obvious that instead of *B* sending gold to *A* in India, and *D* in India similarly remitting gold to *C* in London, it would be much more economical, safer and more convenient, if an arrangement could be made under which *D* in India paid *A* living in the same country, and similarly *B* in England paid *C* resident in the same country. Actually, however, it is not easy for the two parties *D* and *A* in Bombay and *B* and *C* in London di-

¹ See *Elements of Indian Economics*, ch. iv, §4, for a discussion of discriminate protection in India.

rectly to meet each other and settle with each other. The amounts involved in the several transactions may not be identical, the period for which credit is allowed may not be the same, and they may not possess adequate knowledge regarding each other's standing. A system has, however, developed under which, in each country through banks and exchange dealers, the exporters can arrange to receive payments for goods exported and the importers to remit payments abroad for goods imported. Thus our Bombay exporter *A* would walk into the office of an exchange bank and sell his export bill drawn in sterling upon his debtor *B* and get the equivalent amount of rupees at the current rate of exchange,¹ the necessary deductions being made for interest on the bill during its currency, etc. The bank will then send this bill to its branch in London, where on the due date the money will be collected from *B*. In the same way, the London exporter *C* may sell his export bill drawn upon *D* in Bombay to a London bank, which sends it to its branch in Bombay for collection; or our Bombay importer *D* may alternatively buy a draft or T. T. (Telegraphic Transfer) in case of urgency from an exchange bank in Bombay, and send it to his creditor *C* in London, just as the London importer *B* may buy a draft on Bombay from a London bank and send it to his creditor *A* in Bombay. Thus a large volume of international credits and debits is settled by export bills, drafts and telegraphic transfers without any gold being actually exported or imported.

§15. **The mint par of exchange.**—Now the next question is, at what rates are the export bills, drafts and telegraphic transfers sold and bought by banks? The rate of exchange means the price of the different foreign currencies in terms of the local currency. Thus, speaking of the rate of exchange in Bombay, we say that Re. 1 = 1s. 6d., or 1s. 6½d., or 1s. 5¾d. as the case may be. This indicates the relation at any given time between our rupee (local currency) and the British pound sterling. According to the rate that may be current, the bank will determine what it will pay for an export bill or what it will charge for a draft or telegraphic transfer.

Now these rates (as in the case of commodity markets) vary according to the supply of foreign exchange (bills or drafts) and the demand for it, which in their turn are governed by the volume of the international credit and debit items respectively of a country. When two countries have the *same* metallic standard (Gold Standard or Silver Standard) we can speak

¹ Sometimes he may also sell forward to the bank, i.e. in advance of his goods being exported.

of the *mint par of exchange* between them, which is the fixed intrinsic value of the currency unit of one country expressed in terms of the currency of another which has the same metal as its standard of value. The value of the currency unit is taken to depend on the quantity of pure metal that it contains as fixed by law, and the mint par tells us how much of the other country's currency contains the identical quantity of the same pure metal. Thus during the period up to 1914 or the period from 1924-31, the mint par of exchange between London and New York was £1 = \$4·8665, i.e. the sovereign contained as much fine gold (113·0016 grains) as 4·86 dollars (each dollar containing 23·22 grains of fine gold). The mint par of exchange thus supplies the basis of the rate of exchanges between two countries with the same metallic standard. Obviously there is no fixed mint par of exchange between a Gold Standard country like England (before 1931) and a Silver Standard country like India (before 1893). Here the foreign exchange rates are determined by the relative market values of silver and gold, which are constantly fluctuating.

§16. Specie (gold) points.—When two countries are on an *effective* gold standard, the exchange between them fluctuates only within narrow limits. The student should remember that under an *effective* gold standard, the currency authority sees to it that gold is available to anybody who asks for it *at one uniform rate*, in return for legal tender. Thus in England, up to 1914, legal tender money (e.g. Bank of England notes) could always be converted into gold at the fixed rate of 113·0016 grains of fine gold for £1. The same amount of gold could also be had in the United States for \$4·8665 in legal tender money. Thus, up to 1914, the gold points for London in relation to New York were \$4·8365 (export point) and \$4·8965 (import point), the cost of remitting specie being about \$0·03 (either way) and the mint par of exchange being \$4·8665 to the pound. If for a bill on New York, less than \$4·8365 was obtainable for £1, the would-be London buyer (i.e. importer) of the bill would prefer to turn his £1 into gold and ship it to New York, where it would fetch \$4·8665 (mint par). That is, for an outlay of £1 *plus* \$0·03 he gets a command in New York over \$4·8665; or, which comes to the same thing, for £1 he gets \$4·8365 in New York (\$0·03 being the cost of sending £1 worth of gold to New York). For a similar reason, a would-be London seller (i.e. exporter) of a New York bill would not offer more than \$4·8965 for £1 in London, because it would be less expensive for him to receive \$4·8665 worth of gold from his debtor which would fetch £1

in London. The total outlay in this case would be not more than $\$4.8665 + 0.03$ (i.e. the cost of importing gold to London) = $\$4.8965$. These gold points are determined, as hinted above, mainly by the cost of moving gold in either direction between the two countries concerned. As this cost (packing, freight, insurance charges, commission, interest, etc.) is very small, the deviations of the market exchange rates from the mint parity are also very small. Exchange is said to be at the *gold or specie export point* when it is cheaper to ship gold to pay foreign creditors than to buy bills on a foreign centre from a bank. Similarly, exchange is said to be at the *gold or specie import point*, when it is cheaper for a creditor to send for specie (gold) from abroad than accept a lower price (in his currency) for his export bill. It is obvious that exchange will reach the outgoing specie export point when the international debits exceed the credits, and similarly it will reach the incoming specie or gold import point, when the credits exceed the debits in value.

§17. **Favourable and unfavourable exchange.**—When the international debits of a country exceed its credits, the rate of exchange, i.e. the local price of the export bill, will rise above mint par (exchange will be at a premium), since the supply of these bills will fall short of the demand for them. Exchange is then said to be unfavourable to the debtor country, as more of local currency must be paid for a certain amount of foreign money; or, what amounts to the same thing, less foreign currency will be available for a given amount of local currency. It is also considered unfavourable because it may indicate the need for exporting gold from the country to correct the adverse balance of accounts. Exchange in such a case is obviously unfavourable to the importer, who has to pay more in terms of his own currency. But, for the same reason, it is favourable to the exporter who receives more of the local currency. Thus, if the rupee-sterling exchange is 1s. 4d. rather than 1s. 6d., it is favourable to the Indian exporter, since he gets Rs. 15 for £1 worth of goods sold abroad. But it is adverse to the importer since he has to pay Rs. 15 for £1 worth of goods imported, whereas he would have to pay only Rs. 13-5-4 if the exchange were 1s. 6d. In this way the advantages to exporters are counteracted by the disadvantages to importers, and it cannot be said that an 'unfavourable' exchange is necessarily injurious and a 'favourable' exchange necessarily beneficial to the country as a whole.

When the credits exceed the debits, the rate of exchange will fall below mint par in terms of local currency (exchange

will be at a discount), since the supply of export bills is larger than the demand for them. Exchange in this case is said to be favourable to the creditor country, since less of the local currency needs to be paid for foreign currency (or, what amounts to the same thing, more foreign currency is available for a given amount of local currency). It is also favourable in the sense that it may cause an inflow of gold from abroad for liquidating the favourable balance of accounts. Exchange in this case is obviously favourable to the importer since he has to pay less of his currency, but for the same reason it is unfavourable to the exporter who receives less value in terms of his own currency. Thus, if the rupee-sterling exchange is 1s. 6d. per rupee instead of 1s. 4d., it is favourable to the importer, who now pays only Rs. 13-5-4 for £1 worth of goods (instead of Rs. 15), but is unfavourable to the exporter who receives less than before for his exports.

The terms 'favourable' or 'unfavourable' are thus somewhat misleading. In the course of international trade we are sometimes bound to have an excess of exports and at other times an excess of imports. In the former case exchange will tend to be favourable, and in the latter case, unfavourable. There is, generally speaking, no occasion for rejoicings or regrets in all this. The terms favourable and unfavourable are reminiscent of the mercantilist way of thinking, which is not our present way. The mercantilist policy welcomed an excess of exports over imports because this showed that the nation was selling more than it was buying, and this was regarded as a very desirable state of things. It also led to an inflow of gold into the country, and the mercantilists attached great importance to gold.

§18. Modes of exchange quotations.—Unfortunately, there is no uniform mode of exchange quotations followed by all countries, and thus a great deal of unnecessary confusion is caused, especially when the expressions 'rising' and 'falling exchanges' are used. There are two principal modes of exchange quotations: (i) One method is to take the local currency as a fixed unit. Thus, as between the rupee and sterling, the rupee is taken as fixed and sterling as variable and we say, e.g., that the rupee is equal to 1s. 6d. (or more or less in sterling). We might as well have said that £1 = Rs. 13-5-4 (or more or less rupees). It is simply a matter of convention that the first method of quoting is adopted. (ii) In quoting the exchange with Japan, according to the established convention, the foreign currency is taken as fixed, the unit adopted being 100 yens, and we say that 100 yens is equal to so many rupees and to so

many more or less rupees according to the exchange fluctuations between India and Japan. The exchange in India on New York also is expressed as \$100 equal to so many rupees. In America, this second method is consistently followed. The foreign currency unit is kept fixed and is always expressed in terms of local currency (i.e. in dollars). Apart from the merit of consistency, this plan makes for the proper use and understanding of the expressions 'exchange at a premium' and 'exchange at a discount'.

§19. **Purchasing power parity.**—Up to 1914, as most of the important trading nations of the world were on an effective Gold Standard, fluctuations in exchanges between them were restricted to a narrow range on either side of the mint par of exchange. The Gold Standard having been generally abandoned, it is no longer possible to explain exchange fluctuations with reference to mint parity. A substitute has however been found in the new *purchasing power parity theory* associated with the name of the Swedish economist Cassel. According to this theory the fundamental factor, which in the long run determines the rate of exchange between any two countries, 'is not the relative amount bought and sold across the national frontiers in a given period (i.e. the trade balance), but it is the price levels in these countries which are the cause of these trade movements.'¹ The old mint parity itself may be said to have measured the relative purchasing powers of the various Gold Currency Standards, since gold, owing to its free international movement, tended to acquire the same value all over the Gold Standard area. If, that is to say, the pound sterling, up to 1914, was equal to \$4·8665, this was because the pound on the one hand and \$4·8665 on the other had the same gold value. Their purchasing power over gold was identical and this gold in its turn purchased the same quantity of goods and services in all the Gold Standard countries. But with the advent of inconvertible Paper (Currency) Standards during the war of 1914-18 and the varying degrees of inflation which occurred in the different countries, there was a greater rise in the general price level in some countries than in others. The purchasing power of these several monetary units fell more in some countries and less in others, and the fluctuations in the rates of exchange became very violent. Cut adrift from the old mint parity, they appeared to be entirely arbitrary. In the old days we could say that exchange fluctuations were restrained by the mint parity. In terms of the new doctrine we now say that the determining influence is the respective purchasing powers of the various

¹ See Gregory, *Foreign Exchanges before, during and after the War*, p. 80.

currencies in terms of goods and services, or rather that this regulating influence of relative prices is and has always been operative; only, in the old days, we were content to state the purchasing power parity of currencies with reference to gold directly and with reference to goods and services only by implication and inference. The theory of purchasing power parity may be explained in the words of Dr Cassel himself. 'Given a normal freedom of trade between two countries, *A* and *B*, a rate of exchange will establish itself between them, and this rate will, smaller fluctuations apart, remain unaltered as long as no alteration in the purchasing power of either currency is made and no special hindrances are imposed upon trade. But as soon as inflation takes place in the money of *A*, and the purchasing power of this money is, therefore, diminished, the value of the *A*-money in *B* must necessarily be reduced in the same proportion. And if the *B*-money is inflated and its purchasing power is lowered, the valuation of *A*-money in *B* will clearly increase in the same proportion. If, for example, the inflation in *A* has been in the proportion of 320 to 100, and the inflation in *B* has been in the proportion of 240 to 100, the new rate of exchange will be three-fourths of the old (say mint par) rate. Hence the following rule: When two currencies have been inflated, the new normal rate of exchange will be equal to the old (mint parity) rate multiplied by the quotient between the degrees of inflation of both countries. There will of course always be fluctuations from this new normal rate, and in a period of transition these fluctuations are rather apt to be wide. But the rate calculated in the way indicated must be regarded as the *new parity* between the currencies. This parity may be called the purchasing power parity, as it is determined by the quotient of the purchasing powers of the different currencies.'¹

The following illustration² makes the idea quite clear. Suppose that as compared with 1913, which is taken as the basic year, prices in the United Kingdom have risen to an index of 150 and that French prices have risen to an index of 300. If the pre-war rate of exchange were 25 francs to the pound, the new normal will be 50 francs to the pound. Thus:

$$\begin{array}{rcl}
 300 \text{ present francs} & = & 100 \text{ pre-war francs} \\
 & = & 4 \text{ pre-war pounds} \\
 & = & 6 \text{ present pounds} \\
 50 \text{ present francs} & = & 1 \text{ present pound} = \text{Purchasing} \\
 & & \text{Power Parity.}
 \end{array}$$

¹ Cassel, *Money and Foreign Exchange after 1914*, p. 140.

² See D. T. Jack, *The Restoration of European Currencies*, pp. 15-16.

If the actual exchange rate differs from the purchasing power parity thus arrived at, then we are justified in inferring that equilibrium is not established and that, in the course of time, forces will come into play to bring the actual exchange rate and the purchasing power parity closer together.

Suppose in the above example that the actual exchange between the franc and sterling does not coincide with the calculated parity and that the pound, instead of being quoted at 50 francs, is quoted at 55 francs. In that case, French products will be cheap to British purchasers and British goods will be dear to French purchasers. A British merchant by spending £100 could obtain 5,500 francs, and with that sum in francs he could buy French goods, which when sold in England, could fetch £110. Conversely a French merchant could only get £100 for 5,500 francs and for that sum would merely be able to purchase British goods to the value of 5,000 francs. British imports from France would thus receive a stimulus and British exports would be checked. The increased demand for francs arising in this manner would raise the value of the French currency until the exchange settled at about 50 francs.

§20. Limitations of the doctrine.—There are various difficulties in applying this doctrine in practice. In the first place, the only way of measuring price levels in the different countries is by using index numbers, and index numbers are by no means accurate and infallible guides and might easily lead one astray. Special caution is necessary in using them for the purpose of comparing the range of price levels in two or more countries over a particular period, because the figures are compiled in different ways in different countries. Moreover, the basic year selected may not be equally suitable in all the cases concerned. For example, there may have been some local peculiarity in the circumstances of the basic year for a particular set of index numbers, or the character of the production may have changed during the period in one or more of the countries. As regards the statistical employment of the doctrine of purchasing power parity, the employment of index numbers implies the important assumption that changes in the prices of goods entering international trade have been followed by similar changes in the prices of all other goods. As Lord Keynes has put it: 'The theory does not provide a simple or ready-made measure of the "true" value of the exchanges. When it is restricted to foreign-trade goods, it is little better than a truism. When it is not so restricted, the conception of purchasing power parity becomes much more interesting, but it is no longer an accurate forecaster of the course of the

foreign exchanges' The theory can supply only a very approximate guidance, and its practical utility is of a strictly limited character. It indicates the limits for the fluctuations of foreign exchanges, but not in the precise manner that was possible when the Gold Standard was in general use

SUMMARY

International trade results mostly from individual voluntary bargains entered into by people resident in one country with people resident in other countries. Problems of international trade have to be treated separately from problems of internal exchange because labour and capital do not move freely from one country to another as they do from place to place in the same country. The existence of tariffs and the fact that the currency systems of different countries vary also raise special questions which have not to be faced in internal exchanges. The character and the terms of international exchange are determined in accordance with the principle of comparative cost. Nations engage their capital and labour in those industries with regard to which they have the highest relative advantage over other nations. More wealth is thus produced and becomes available to the countries dealing with one another in the course of international commerce. However, although all derive a benefit the benefit is not uniform. The proportion in which the benefit of international trade is distributed among the parties depends on their relative intensity of demand for each other's goods.

Exports pay for imports—This proposition is subject to the following explanations: (i) Sometimes imports may be greater than exports, because payment is postponed. (ii) International loans for the time tend to increase the imports of the borrowing country without an immediate equivalent increase of exports. (iii) When the process of repayment begins the position is reversed and the borrowing country's exports tend to be in excess of its imports. (iv) Under exports and imports all items—*visible and invisible*—officially recorded or not, are to be included.

International trade brings within our reach utilities not otherwise attainable, ensures the most efficient employment of the productive resources of the world and the full exploitation of natural resources makes production more economic by enlarging its scale and is one of the most potent instruments for the spread of culture and civilization. Properly appreciated it ought also to act as a powerful preventive of international warfare.

On the other hand, it may lead to too rapid an exhaustion of the natural resources of a country, and endanger national security by fostering a habit of dependence on other nations for essential requisites. It may subject a country to violent economic dislocation due to dumping. It may lead to the importation of shoddy or harmful articles. And finally it may cause economic development to be too one-sided. These evils, however, can largely be prevented by the regulation of international commerce and the presumption is in favour of promoting its utmost expansion. This general attitude is not inconsistent with the policy of *discriminate protection*. Some departure from free trade or protection is justifiable on certain special economic or political grounds, e.g. (i) for the temporary protection of infant industries. (ii) for securing a

certain amount of diversification of industry, (iii) for the development of important key industries, and (iv) as a temporary remedy against dumping. (v) Protection is also sometimes advocated as a negotiatory factor or an instrument of retaliation. It is, however, risky to engage in tariff wars.

Protection is a remedy which is not to be applied lightly but with due care and caution. It increases the cost of living and may cause a shrinkage of the public revenues. It should not be used so as to encourage inefficiency in production, and steps should be taken to minimize one of the greatest evils associated with it, namely, political corruption.

FOREIGN EXCHANGES

By foreign exchanges we understand the system by which international obligations arising in the course of trade and other transactions are discharged. This is mainly done through bills and other instruments of exchange on foreign centres, and the theory of foreign exchange explains the laws governing the value of these bills and instruments, i.e. the value of one national currency in terms of other national currencies. So long as the principal currencies of the world were on a gold basis these relative values depended very closely on the amount of gold which the currency unit of each country could be converted into. Fluctuations of exchanges depended mainly on the cost of sending gold as compared to the cost of remitting money in the form of a bill of exchange. Now that the Gold Standard has been largely abandoned the limits of fluctuations in foreign exchanges, formerly indicated by the *gold points*, have become less easily calculable. In terms of the doctrine of *purchasing power parity* we have now to be content with saying that at any given time the rates of exchange will tend to be such that at those rates the internal and external purchasing power of any currency will be the same. In order to make calculations on this basis we have necessarily to employ index numbers which, however, can give us only approximate indications and not precise information as to the limits within which exchanges will fluctuate. These limits again are liable to change from time to time with changes in the purchasing power of the respective currencies. When the Gold Standard was generally prevalent, the gold value of every currency unit was definitely and unalterably fixed. Now we have to fall back on the power of each currency to purchase commodities and services and this is not fixed. The centre round which the foreign exchanges will move will thus be constantly shifting.

The terms *favourable* and *unfavourable* exchange are harmless enough if they are stripped of their mercantile associations. The value of one currency is likely to rise and fall in terms of other currencies in accordance with changes in supply and demand or temporary excess of exports or imports. From a banking point of view, however, it may sometimes be desirable to correct an unfavourable exchange if there is a danger of its causing so much gold to leave the country as seriously to deplete the banking reserves, bringing about too great a contraction of credit.

All countries do not adopt the same uniform method of quoting exchanges. In some cases the local currency unit is taken as fixed and the foreign currency units as variable. In other cases the reverse process is adopted. For various reasons it is better to follow the second method.

XIII

DISTRIBUTION: RENT

§1. The national dividend theory of distribution of wealth.—Before embarking upon a detailed discussion of the theory and problems of distribution it is convenient to give a brief preliminary view of distribution of wealth.

Distribution of wealth, as we know, means the apportionment of the aggregate of goods and services, among the owners of the four factors of production who have collaborated in the process of their production. The study of distribution involves the consideration of the following three main questions :

- (i) How much is there to be distributed?
- (ii) Among what factors is the joint product to be divided?
- (iii) What determines the share of each factor?

In what he calls the national dividend theory, Marshall furnishes a succinct answer to all these three questions on the following lines.¹

§2. How much is there to be distributed?—‘The Labour and the Capital of a country acting on its natural resources produce annually a certain *net* aggregate of commodities, material and immaterial, including services of all kinds. This is the true annual income or revenue of the country or the National Dividend.’ The national dividend is thus the heap or pool of goods and services of every kind produced annually in the country. Into this pool, we may imagine, are thrown the contributions of all the productive agents in society. The national dividend can be measured by the money value of the gross produce of society, from which are to be deducted (i) the value of the raw and half-finished commodities used, and (ii) the replacement fund necessary for repairing and replacing plant and machinery. The need for making this allowance is indicated by the word ‘net’ in Marshall’s statement. The net income due on account of foreign investments must be reckoned in as an addition to the national dividend. Its net aggregate amount determines what is available for distribution and sets a limit to the shares received by the various agents of production.

§3. Among what factors is the joint product to be divided?—‘The National Dividend is at once the aggregate net product of, and the sole source of payment for, all the agents of pro-

¹ *Elements of Economics of Industry*, pp. 252-3.

duction within the country. It is divided up into the earnings of labour; interest of capital; producer's surplus or rent of land and lastly the profit of business enterprise. 'It constitutes the whole of them, and the whole of it is distributed among them; the larger it is, the larger, other things being equal, will be the share of each of them.' It should be noted that the *problem of distribution is envisaged here as one of functional distribution and not of personal distribution*. That is, we have to explain the four main streams into which the national dividend flows, reaching the four main social groups of labourers, capitalists, landlords and entrepreneurs. It is not possible to ascertain and explain the income that accrues to each man, woman and child. Individuals are aggregated into appropriate classes or groups corresponding to the four factors of production.

§4. What determines the share of each factor?—This last is the most fundamental and controversial problem. Marshall's general answer to this question is as follows: 'It (the national dividend) is distributed among them (i.e. the agents of production), speaking generally, in proportion to the need which people have for their several services, i.e. not the *total* need, but the *marginal* need. By this is meant the need at that point, at which people are indifferent whether they purchase a little more of the services (or fruits of the services) of one agent, or devote their further resources to purchasing the services (or the fruits of the services) of other agents. Other things being equal, each agent is likely to increase the faster, the larger the share which it gets, unless indeed it is not capable of being increased at all (e.g. land). But every such increase will do something towards filling up the more urgent needs for that agent; and will thus lessen the marginal need for it, and lower the price at which it can find a market. That is to say, an increase in the proportionate share or rate of remuneration of every agent is likely to bring into play forces that will reduce that share and leave a larger proportionate share of the dividend to be shared among others.'

Each factor of production thus draws from the national dividend a reward in the measure of its respective marginal efficiency, allowing for the possibility, within certain limits, of substitution of one factor for another. To quote Marshall once again: 'Every agent of production, land, machinery, skilled labour, unskilled labour, etc., tends to be applied in production as far as it profitably can be. If employers and other business men, think that they can get a better result by using a little more of any one agent they will do so.'

The national dividend theory of distribution is thus an ap-

plication of the general theory of value to the problems of distribution. The shares of the factors of production are regarded as the prices paid for their (marginal) services determined by demand in relation to supply as in the case of the values of ordinary commodities. Nevertheless we cannot identify the theory of distribution with the general theory of value. On the demand side the analogy appears to be complete. The price paid to an agent of production is determined by its marginal utility or service as in the case of ordinary commodities. But there are certain peculiarities on the supply side. For example, one agent of production (land) has no supply price, in the sense that its supply is fixed and is not therefore directly affected by changes in its share (rent). Again, the supply prices of the other factors of production, especially of labour, cannot be calculated as precisely as the supply prices (cost of production) of commodities. It is, therefore, necessary to study the theory of distribution separately, instead of disposing of it by stating that it is just another illustration of the general theory of value.

§5. Nature of distribution of wealth.—We have said that the aggregate of goods and services is divided among the various factors of production. In actual practice, however, rents, wages, interest and profits are ordinarily paid in the form of money. But then the money merely represents a certain claim on the goods and services which we can purchase with it. So that our proposition stands; its essential truth is not affected by the intervention of money. Moreover, we know that sometimes payment is made in kind for the various kinds of effort required for the production of wealth. For example, labourers may get their wages partly or wholly in the form of grain, clothes, etc. Here the Indian student will naturally be reminded of the practice, still prevalent to some extent in this country, by which the different village servants and artisans are assigned a certain proportion of the produce raised in the village.¹

We might as well deal here with another little difficulty. Some of the payments representing the shares of the various factors of production are paid *before* the process of production is complete. How then can we say that the different shares come out of the goods and services produced by the co-operation of the four agents of production? This objection, however, is superficial. Wages, for example, are no doubt paid in advance. But in order that the labourers should be *continuously* employed and paid, the employer must be able to put the goods produced by the help of the labourers on the market and sell them profitably. If this cannot be done, he will soon-

¹ See *Elements of Indian Economics*, ch. II, §§3-4.

er or later close down his establishment and dismiss the workers. In this sense the real source of the wages is the wealth produced by the co-operation of labour. What holds good of wages also holds good of the other shares or kinds of income, namely, rent, interest and profits. They are all derived, let us repeat, from the aggregate of goods and services brought into existence by the combined effort of those who provide land, labour, capital and organizing ability.

It is obvious that the shares allotted to these agents of production are not equal. They depend on a series of bargains which the organizer or employer (who takes the initiative and is the most active of all the agents of production) strikes with the other three agents of production. The bargains are freely entered into by the parties concerned and are not forced on them by some outside power like the Government. What determines the terms of these bargains and what determines the profit which the employer himself earns? These are the questions which we have to deal with. In other words, we have to examine the forces and the causes underlying rent, interest, wages and profits.

§6. Private property as the basis of distribution.—Before discussing more in detail each of these four kinds of income it will be convenient to study the institution of private property which may be regarded as the basis of the existing system of distribution. It underlies the whole of our present scheme of distribution of wealth. It is the mainspring of modern economic life and the *bête noire* of the socialist, who regards it as the prime cause of whatever is irrational and unjust in the present system of distribution.

§7. Evolution of private property.—In the earliest stages of civilization there was neither communal nor private property, as men lived from hand to mouth. The idea of group property arose gradually when, for example, packs of savage men came to regard certain preserves as their own. The earliest forms of private property were probably certain moveable objects like personal ornaments and weapons which were looked upon as an extension of personality. Domestication of animals in the pastoral stage led to an extension of private property in herds or flocks and even in women, children and slaves, who were now required to look after the cattle. The land or pastures belonged to the group under tribal customs. Private property had its origin in 'user' and 'seizure' but had a social sanction because by encouraging thrift and energy in the individual it ultimately led to group welfare.¹

¹ See Seligman, *op. cit.*, pp. 125-6.

The transition to the agricultural stage, with its fixed abodes and settled life, greatly extended the scope of private property, especially in immoveables, fixed abodes and ultimately land. Nevertheless, private property in land was slow to develop and passed through several stages such as temporary allotments of arable land, the 'open-field' system with its communal practices, superimposition of feudal or overlord rights upon the rights of the village community, etc. In some cases, as generally on the continent of Europe, the overlord was eventually swept away to make room for the peasant proprietor. In other countries, like England, he managed to deprive the tenants of their customary rights and to concentrate large estates of land in his own hands. At first there was no freedom to dispose of land, but later full rights in this respect were acquired. The old communal restrictions on land (e.g. common rotation of crops) were now abandoned, and the landed proprietor was allowed to develop his land in the way he thought best without in any way being bound by what others did. It was recognized that this was after all the best policy from the standpoint of social welfare and that the spur of private property was essential in order to stimulate the best efforts of private enterprise into utilizing a limited supply of land in the most effective manner possible so as to meet the needs of a growing population. There were also several other social and political reasons for strengthening the rights of private property in land. With the Industrial Revolution other forms of wealth came into prominence, and the scope of private property was extended to such things as coal-mines, factories, patents and copyrights, shares and bonds, in fact to all exchangeable things. At the same time the number of possible property-owners was enlarged. In addition to the sovereign, the Church, the family, individuals (including women and children), joint-stock companies, trusts and other institutions were also allowed to possess private property. Thus today the field of corporate property has become very extensive.

§8. Attributes of private property.—The following rights are implied in the concept of private property (i) of use, (ii) of gift, (iii) of disposition by contract, and (iv) of bequest.

(i) The *use or exploitation* of private property was the earliest right to be recognized, but is subject to the eminent domain of the State which has the power to acquire private property for public purposes (e.g. for laying out a railway track or constructing public buildings), or to secure the workers' safety, etc.

(ii) The *right of gift* is now recognized as an extension

of the right of use. It is subject in some countries to certain old feudal restrictions.

(iii) The owner of property has the right to *dispose of* it by selling, or mortgaging, or letting it. This right was not allowed so long as property was owned by the family as a whole, as is the case even now with regard to ancestral family property in India.

(iv) The *right of bequest*, i.e. the right to regulate by a will the succession to property after the owner's death, has developed slowly. This again is defended on the ground that it is necessary for securing efficient production and for preventing extravagance during the lifetime of the owner. The right of bequest by the testator and the right of inheritance by the survivors are fundamentally opposed. The modern tendency has been to ~~to~~ ^{to} ~~the~~ ^{the} right of bequest and curtail inheritance. In order that the right of bequest should not be exercised to the detriment of the children, it is sometimes limited in their favour (as in France). In India it can be exercised only as regards self-acquired property and not ancestral property.

§9. **Inheritance.**—Inheritance of property has been opposed on the following grounds: (i) It encourages idleness because it makes possible the acquisition of wealth without having to labour for it. (ii) It undermines parental authority and leaves no scope for judicious distribution of property among the inheritors according to their needs and deserts. (iii) In India equal inheritance of landed property has led to the evil of excessive subdivision of holdings. (iv) It leads to and emphasizes inequality of wealth distribution.

On the other side it is argued that the law of inheritance is based on the natural expectations of children or near relations for support.

On balance, the right of bequest is more easily defensible than inheritance, though both need to be limited more or less in the general social interest—inheritorship needing more limitation than bequest. John Stuart Mill favoured limitation on the ground that the State is really a partner in private business. It provides security and protection and has therefore a just economic claim to property left by a deceased person. State appropriation of at least a part of the property, on a progressive scale, especially in the case of the more distant relations, has been advocated in many countries. In England, there has been a great development of progressive inheritance taxes, and death duties ranging from 15% to 25% are levied by the State.

§10. **Theories of private property.**—What constitutes the basis of private property has been the subject of much controversy.

(i) *The occupation (possession) theory* may explain the origin of the present legal title to certain forms of property, but cannot be used as a justification of private property except in the case of previously unoccupied or unutilized wealth.

(ii) *The natural right theory* regards private property as part of the law of nature. 'Natural' or 'inalienable' rights are vague terms and on analysis fail to provide adequate grounds for private property. Perhaps what is suggested is that private property is an indispensable condition of full self-realization of the individual, and as such should be sanctioned by law.

(iii) *The labour theory*.—The classical economists argued that every person had a right to the product of his own labour. This certainly appears plausible on economic grounds, for no one would exert himself to the best of his ability unless he were assured of the fruits of his labour. But even this theory is not free from difficulties. Land in its original condition is a free gift of nature and therefore the labour basis is **not** available here. In fact all material objects contain an element of nature, and nothing is the result of labour alone. Then again inherited property cannot be justified on the labour basis. Further, under the complex modern system of division of labour, it is impossible to separate the specific produce of the labour of a particular individual from the total value of the product.

(iv) *The contract basis* which states that men have a right to expect fulfilment of the contracts made with them, has therefore been suggested. It is in a way only the modern development of the labour theory. Under the wage system men contract with each other for a certain payment in exchange for a certain amount of work. Contract then becomes the basis of distribution, and confers the same sanctity as was given by labour to the right of property in the result.¹

(v) *The legal theory*.—Under this theory, it is held that whatever is recognized as such by law is rightfully private property. This is not an economic basis. 'The legal theory tells us what property is, not what it should be' (Seligman).

(vi) *The social utility or utilitarian theory*.—Defenders of private property nowadays rely mainly on the argument that it is a necessary instrument for securing the best utilization of natural resources. The greatest possible effort and enterprise on the part of individuals will be forthcoming only if the inducement of private accumulation of wealth and property is held out. It is clear, however, that if we accept this basis, we must also accept certain limitations of private property suggested by the same consideration of ultimate social benefit.

¹ Todd, *op. cit.*, p. 168.

Thus it may not be socially desirable to leave everybody free to use his property as he likes. From this point of view, a check on absentee landlordism may seem to be called for, as also on the process of subdivision of land. Private property rights in certain national assets like forests, mines and railways must also be suitably limited. Private property in such things as highways and docks has by experience been proved to be highly undesirable. Similarly, it is no longer denied that property in human beings (slavery) is economically as well as morally to be condemned. Copyrights and patents may be necessary, but the period for which they hold good must not be unduly long. All this, however, does not mean that the only way to prevent abuses of private property is to abolish it altogether.¹ Such an extreme remedy is likely to be worse than the disease. In the meanwhile, through the progressive enlargement of the economic functions of the State, the manipulation of the taxation system, the provision of free education and other facilities intended to equalize opportunity for all, through legislation in the shape of Factory Laws and Tenancy Laws, the principal abuses of private property are being increasingly brought under control.

We shall now undertake a detailed treatment of the four main shares in the national dividend : rent, wages, interest and profits.

RENT

§11. Economic rent and contract rent.—In popular parlance the term 'rent' is used to mean a sum paid by one person to another for the lease of land. This contract rent, as it may be called, often includes, besides economic or pure rent,² other elements such as interest on capital invested by the landlord in his land and farm buildings, and charges of supervision. Moreover, influences, other than competition which is assumed to be the basis of economic rent, may affect contract rent. Thus rent actually paid may be more than the economic rent, e.g. when there is monopoly in land or when there are no alternative occupations; or it may be less because it is customary or because considerations of a philanthropic nature may influence the landlord in dealing with his tenantry.

§12. Preliminary analysis.—As a preliminary to an analysis of economic rent, it is desirable that we should remind ourselves of the wide sense which we attach in economics to 'land', the income from which we call 'rent'. Land means all those utilities which nature supplies free but in limited quanti-

¹ See §20.

² See §13.

ties. It is important to bear in mind the fact that land is limited in quantity. If the demand for cloth increases, more cloth can be produced. And this can happen to an unlimited extent relatively to man's power of consumption. Greater effort stimulated by a greater demand will call forth a greater supply. But this does not apply to land. No matter how much the demand may increase, its supply remains the same. Particularly is this the case in old countries like India where practically all the cultivable land is occupied.¹

Besides being limited in quantity, land varies in quality. Some lands are more fertile than others. The most fertile lands are naturally the first to be occupied and cultivated. As population increases, however, recourse must be had to inferior lands, or the superior lands must be more intensively cultivated.

As we shall see presently, the theory of rent, first clearly formulated by Ricardo, is based on the assumption that the more fertile lands are cultivated first. Carey, an American economist, objected to this assumption (and therefore to the theory which was based on it) that it was historically untrue. He argued that 'in every quarter of the world cultivation has commenced on the sides of the hills where the soil was poorest, and where the natural advantages of fertility were the least'. But this objection loses its force, if the term 'fertility' is understood to include not only the physical and chemical properties of the soil but also other elements such as accessibility. Land very rich so far as physical and chemical properties are concerned, may be situated in the midst of a jungle infested by wild animals and may be disease-ridden. So long as these handicaps remain, people will prefer other land even though it may be naturally less fertile. 'The most 'fertile' land, therefore, means the land which, in any given set of circumstances, is best adapted for cultivation and is calculated to yield, all things considered, the best return for the available capital and labour. In other words, we widen the conception of fertility so as to include such elements as accessibility to markets, safety to health, and security. Fertility is relative to time, place and circumstances, and all that is necessary for our purpose is to recognize that, at any given time, taking into ac-

¹ It will be noticed that after asking the reader not to forget the wide sense in which the term 'land' is used in economics, we are gradually sliding back to the more common meaning of the term. There is really no harm in doing this, because it will be found that although the exposition of the theory of rent is most easily understood with reference to land in the ordinary popular sense of the term, its application can be extended to any other thing included in the wider signification of land.

count all circumstances, certain lands appear more desirable, and certain others less desirable. It is not claimed that the grading of land in this manner, which is appropriate to one period and set of circumstances, will hold for all time and in spite of any change in circumstances.

§13. The Ricardian theory of rent.—Now we may proceed to state the theory of rent on the lines of Ricardo. Let us suppose that the land in a given country falls into grades *A*, *B* and *C*; *A* being the most fertile, *B* less fertile, and *C* the least fertile. *A* will be cultivated first, and then when population increases and the demand for food with it, *B* will be brought under cultivation, and when there is a further increase in population, *C* will also come under cultivation. Let us suppose that capital and labour worth Rs. 10,000 is spent on land belonging to grade *A* and that the yield is 100,000 seers of wheat. More wheat is required for a growing population, so that gradually capital and labour worth another Rs. 10,000 is employed on land of the *B* grade. This grade being inferior to *A*, the yield is only 80,000 seers. The community grows further in numbers, and requires more than the total of 180,000 seers realized from *A* and *B*, and therefore *C* is taken under cultivation and a further dose of capital, say, another Rs. 10,000-worth, is applied to it. *C* being the worst grade of all three, the yield is now only 50,000 seers. But according to our hypothesis this additional 50,000 seers is urgently required. Now all this wheat being of the same quality must sell at the same price. Possessors of *A* would demand at least Re. 1 for 10 seers, though they would welcome any higher price than this. Similarly, owners of *B* would be prepared to accept Re. 1 for 8 seers, though, of course, they would also welcome any higher price that they could get. The minimum price which would suit growers on *C* would be Re. 1 for 5 seers. It is obvious that out of these three possible prices the only one that will suit all the growers is the last. This price is necessary if *C* is to remain continuously under cultivation. (And *C* must remain under cultivation; otherwise the demand of the community for food is not satisfied.) At the price of Re. 1 for 5 seers, all the expenses of production on land *C* will be just covered.¹ The owners would get the full value at current rates of the different kinds of effort employed (including wages of the ordinary la-

¹ The student must not make the common mistake of supposing that it would not be profitable to cultivate *C*, if the price is Re. 1 for 5 seers. It *would* be profitable in the sense that labour, capital and organization would all get their normal remuneration out of this price. But no *unearned* surplus over and above this would be available, as in the case of the superior grades of land.

bour and of management plus interest on the capital) amounting to Rs. 10,000. At the uniform price of Re. 1 for 5 seers *B* will realize Rs. 16,000, that is Rs. 6,000 more than *C*. *A* will realize Rs. 20,000, that is Rs. 10,000 more than *C*. In this example, *C* is the worst land in use. It is called *marginal land* or *land of marginal fertility*. Lands *B* and *A* are above the margin and are called *super-marginal lands*. *C* yields just enough to cover all expenses and no surplus or rent. It is also known as the *no-rent land*.

A surplus or rent is obtained on *B* and *A*. The rent on *B* may be expressed either as 30,000 seers of wheat (80,000 *minus* 50,000 = 30,000), or as Rs. 6,000 (that is the value of 30,000 seers at the market rate). The rent on *A* is 50,000 seers of wheat (100,000 *minus* 50,000 = 50,000), or Rs. 10,000 (that is the market value of this extra 50,000 seers). Rent on the superior lands is thus measured from the marginal or no-rent land upwards. It expresses the *differential advantage* of the superior lands over the marginal land. Rent is also an *unearned surplus* or an *unearned increment*, as it is sometimes called. It does not represent the reward to any special kind of effort or capacity. The lands *A*, *B*, *C* are assumed to be cultivated in the same manner and with equal efficiency. *A* and *B*, however, being superior in fertility, yield a surplus over *C*. The same truth is expressed by saying that *rent arises from the operation of the Law of Diminishing Returns*.

Man's desire for more and more food compels him to resort to worse and still worse lands. This is the same thing as saying that the returns to successive doses of capital and labour go on diminishing. As we have seen, the Law of Diminishing Returns has an extensive aspect, and up to the present our exposition of the theory of rent has had reference to this extensive aspect. However, rent can also be seen to follow from the Law of Diminishing Returns in its intensive aspect. If more wheat is wanted we have to pass on from the superior to the inferior land. But another way is to cultivate the same land more and more intensively. Thus, in the above example, instead of fresh doses of Rs. 10,000-worth of labour and capital being applied to progressively inferior lands, we may suppose them to be applied to the same (superior) land. Then the first Rs. 10,000 applied to *A* yields 100,000 seers, the next Rs. 10,000 yields 80,000 seers, and the third dose of Rs. 10,000 yields 50,000 seers. Here again the price must be uniform and it must be 5 seers per rupee; otherwise why should the farmer proceed with the cultivation at progressively increasing expense? Here the third Rs. 10,000 is designated the mar-

ginal dose of capital and labour. As compared with this, a surplus is realized on the first and second doses, and this surplus is rent. The above reasoning is illustrated in Fig. 17.

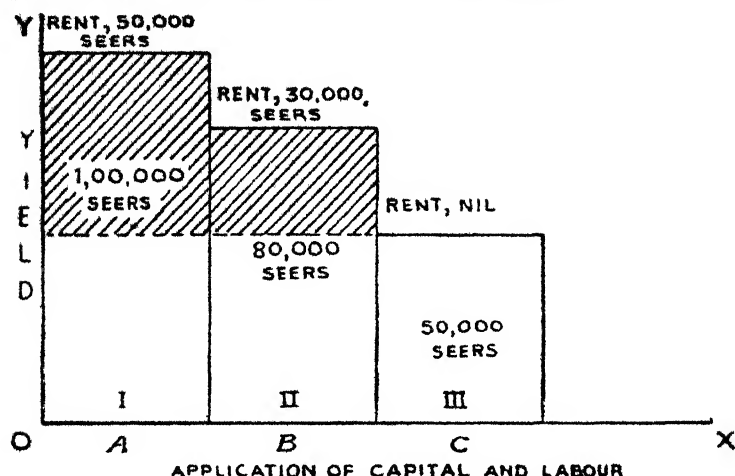


FIG 17 —DIAGRAM ILLUSTRATING HOW RENT ARISES FROM THE OPERATION OF THE LAW OF DIMINISHING RETURNS

The rectangles I, II, and III represent the yield respectively to the first, second and third application of capital and labour worth Rs 10,000, either to different lands A, B, C in decreasing order of fertility, or intensively to the same land A, each succeeding dose of capital and labour yielding a smaller return than the previous one. The shaded portions of the rectangles I and II represent the rent or surplus produce on lands A and B, or on the first two doses applied to land A. Land C, or the third dose applied to land A, does not yield any rent.

§14 **Rent does not enter into price.**—This should not be difficult to understand, if we remember that the price is determined by the cost of production of the marginal land, and that marginal land is no-rent land. In the example we have used above, we saw how the price was Re 1 for 5 seers, because the expenses of production on marginal land C were Rs 10,000 for 50,000 seers of wheat; Rs. 10,000 here included wages, interest and profit but not rent. The demand of the community could not be satisfied without bringing C under cultivation, and C could not be brought under cultivation unless the price was such as covered its cost of production. This price, however, is more than necessary to cover the cost of production on lands A and B and this excess emerges as rent in the case of these lands above the margin. *Rent is a price-determined surplus;*

it does not itself determine the price. It is the result, not the cause, of price. As Ricardo puts it: 'Corn is not high because a rent is paid, but rent is paid because corn is high.' Supposing no rent is actually paid for lands of grades *A* and *B*, this would simply mean that the surplus would accrue to the tenants instead of to the landlords. But it would not make any difference to the price, which is regulated by the expenses of production on the marginal land.

§15. **Exceptions.**—The relation between rent and price as discussed above holds good only of pure economic differential rent, which is so called because it measures the difference between marginal land and land above the margin. *There is, however, a variety called scarcity rent and this does enter into price.* Demand for land may become so intense that the farmer may have to pay rent even for the worst land. But he is in a position to compensate himself by charging a higher price. The greater intensity of demand means the greater ability or willingness of the consumers to pay a higher price.

Again, if land is diverted from one use to another, rent arising in connexion with the first use may form part of the price in the second use. Suppose land used for wheat is required for cotton. In our example, land *B* earned some rent. Suppose a farmer wants to raise cotton on it. He will in that case have to pay the landlord at least as much rent as *B* was earning when it was being used for wheat, although for cotton it might rank as the worst or the marginal land. As we saw, the grading for wheat in order of fertility or productivity was:

| | | |
|--------------------------------|----------|----------|
| <i>A</i> | <i>B</i> | <i>C</i> |
| The order for cotton might be: | | |
| <i>X</i> | <i>Y</i> | <i>B</i> |

X and *Y*, let us suppose, are superior lands which are already under cotton. Now *B* is also taken up for cotton; and happens to be the worst land in use for that purpose. So the price of cotton will be influenced by the rent paid for *B* in its use for wheat.

Lastly, as in India, the Government may levy rent (assessment) on every bit of land in use in a country, whether it is good or bad. *The rent thus levied on marginal lands must enter into price.* It might, however, be pointed out that the term rent here is not used in the strict economic sense. In reality it is just a tax, and there is nothing differential about it.

§16. **Rent and economic progress.**—As economic rent depends on price, it follows that if the price rises, rent will rise; and if the price falls, rent will fall. A rise of price may be brought

about by an increase of demand, so that while additional capital and labour will be applied the yield will diminish (the margin of cultivation will be pushed forward, i.e. inferior land will come into use or less will be realized from further applications of productive effort to the same land). A rise of price may also be caused by production becoming more difficult or more costly. A fall in price, on the other hand, may be caused by fall in demand and therefore the recession of the margin of cultivation, or by an improvement in the arts of production. Economic progress will lead to rise in rents in so far as it means increase of population and increase of demand. It will lead to a fall in rents in so far as it is attended with improvements in the arts of production.

Rents in an old country may fall as a result of virgin lands in new countries being brought under cultivation. This happened in England when new sources of supply became available and cheap corn began to be imported from the United States. The margin receded in England as, owing to the fall of prices, the less fertile lands ceased to be employed for growing wheat. It is conceivable that a similar phenomenon will show itself in India as a result of competition from imports of wheat from a country like Australia.

§17. Other applications of the theory of rent.—Having explained the theory of rent with reference to agricultural land, it remains briefly to indicate its applications to other natural resources. It is a matter of common knowledge that business premises on central sites in an industrial and commercial city command high rents which diminish as the premises are situated farther and farther away from the centre. Here the nearness to the central locality corresponds to fertility, because nearness confers many advantages, such as ability to attract the largest number of customers. The buildings further removed from the centre are like the less fertile lands. As the demand for business premises increases, less and less favourably situated buildings are occupied; or alternatively more and more stories may be built on the same spot. But this means greater expense and smaller sales, as people will naturally buy on the ground floor by preference and comparatively few will take the trouble of visiting shops on the upper stories. Building more and more stories is thus analogous to working the same land more and more intensively.¹

§18. Rent of ability.—An interesting parallel to economic rent emerges when we compare the difference in earnings as between

¹ The student should work out for himself similar analogies with reference to mines, fisheries, etc.

one man and another, whether in business or in any of the professions, owing to difference in inborn ability. In so far as the difference in ability is due to nature, the larger earnings of the man with superior brains are to be compared with the higher rents of the more fertile lands. The surplus earnings due to greater innate capacity are sometimes referred to as *rent of ability*.

§19. **Quasi-Rent.**—We saw above that economic rent arises because the supply of land is not variable according to demand. This inability to vary supply according to demand may, however, be experienced in the case of other factors of production also, and so long as it lasts, the yield from them, instead of determining price, is dependent on the current price, like economic rent. Thus an individual employer may introduce a new method or a new machine, the effect of which is a considerable lowering of his costs as compared to the costs of other employers. When the other employers notice this and follow suit there will be a general fall in the cost of production, which will ultimately bring the price down. This process, however, takes time, and in the meanwhile our pioneer employer will earn an exceptional profit—in excess of the normal profit. These *temporary* high earnings arising on account of imperfect elasticity of supply have been given the name ‘quasi-rent’ by Marshall. It is easy to see that in a dynamic society quasi-rent understood in this sense must constantly emerge and vanish. Owing to the protection given to the sugar-manufacturing industry in India, the number of these manufacturing establishments has grown rapidly, creating a demand for sugar technologists. For some time, therefore, those trained as technologists will reap higher rewards than those earned by men of similar ability and attainments in other lines. But this can last only until, attracted by the relatively higher earnings, more men qualify as technologists, and the additional supply will eventually bring down the level of earnings to normal. Just as there may be a temporary shortage of supply, there may also occur a temporary superfluity of supply in relation to demand. A machine may become out-of-date. But it may not be practicable to scrap it at once and substitute the new machine. In the meanwhile, the yield from the old machine may dwindle below normal. A similar fate may overtake the earnings of a profession which has become overstocked. If lawyers as a class are earning less than doctors, this may possibly decrease the number of people trained as lawyers amongst the next generation. But pending the adjustment, the average remuneration in the legal profession will be subnormal and is

of the nature of quasi-rent.¹ Quasi-rent is so called because although like rent it is *differential*, unlike rent it is not *permanent*.

§20. **Are rent-receivers social parasites?**—According to the analysis of economic rent given above, it is a surplus over and above the normal returns to all the factors of production employed. That is why it is called an *unearned increment*. If it is admittedly unearned, why should society tolerate it? Why should the benefit of what is unearned accrue to individuals instead of to society in general? It is this line of reasoning which makes socialists press for nationalization of all land or, failing that, the appropriation by the State of the full economic rent. However, if we remember the wide meaning attached to the term 'land' and also that, as explained in the previous section, something of the nature of rent (quasi-rent) is constantly arising in connexion with other factors of production, nationalization would logically lead to the virtual extinction of all private property. As regards the complete appropriation of economic rent by the State, in theory this is entirely unobjectionable. But in practice we have to set about this business very warily and cautiously, because what is nominally called rent may actually contain other elements, i.e. interest and profits. In any given case it is often extremely difficult, if not impossible, to dissociate economic rent from the other elements (which are earned, and therefore cannot be appropriated without injuring production). In some cases the whole of what the landlord receives may be made up of other elements than rent. For example, he may have purchased the land and the capitalized value of the economic rent may have been included in the price paid to the original owner. Where land is thus constantly changing hands, the pursuit of economic rent for appropriation by the State becomes a very elusive affair. Injustice is also involved in taxing unearned surpluses only in the case of land and exempting other unearned incomes. In saying all this we are not suggesting that any action by the State in the direction suggested by the socialists is bound to be futile or unjust. Sometimes unearned increment may arise in such unmistakable form that

¹ In the first edition of this book we suggested that in this case the quasi-rent would be a negative quantity. Although, in view of the differential character of rent, we consider this interpretation as valid and logical it is not Marshall's own interpretation. Marshall understood by quasi-rent the *whole* earning of a piece of fixed capital. We are much obliged to Mr E. A. G. Robinson, Assistant Editor of the *Economic Journal*, for pointing this out to us.

there need be no hesitation on the part of the State in appropriating it. Such cases often arise in crowded cities when sites suddenly go up in value unexpectedly and without the owners doing anything to add to their value. Even here, however, the question arises whether some of the owners who were more than usually shrewd had not intelligently anticipated developments and deliberately acquired the sites in the expectation of profiting by the transaction. If so, is it equitable to rob them of the legitimate rewards of their superior foresight, and is it not to the ultimate benefit of society to encourage such superior intelligence and foresight? Similarly in the matter of nationalization there may be cases where appropriation is clearly indicated in the larger interests of society. But more harm than good will result from trying to nationalize all natural resources. Ultimately the whole argument will be seen to turn round the question whether or not we desire to maintain in its essentials the present individualistic order of society based on private property.

SUMMARY

The *problem of distribution* requires an answer to the following *three questions*: (i) How much is there to be distributed? (ii) Among what factors is it distributed? (iii) On what principles is it distributed?

The answer to (i) is that the aggregate of goods and services produced in a year *minus* the cost of replacement and renewal of capital is what is available for distribution.

The answer to (ii) is: Land (rent), labour (wages), capital (interest) and organization (profits).

The answer to (iii) can be given on the lines of the general theory of value by saying that each factor tends to get a share representing its marginal efficiency. The problem of distribution however cannot entirely be merged in the general theory of value. For example certain peculiarities of the factors of production, such as land and labour, require and receive special discussion under distribution.

Under our present system ordinarily the reward to the factors of production first takes the form of money which is subsequently exchanged by the recipients for such of the available goods and services as they require. Distribution depends on a series of bargains which those who organize industry or business enter into with the suppliers of land, labour and capital respectively. Payment may in some cases be in advance of production. But it nevertheless comes out of production because it would not be made unless it were expected to create assets to justify it.

Private property which is at the foundation of distribution has evolved very gradually through the centuries and its scope has greatly extended since the Industrial Revolution. The concept of private property implies the right of use, of gift, of bequest, of disposition by contract and of unlimited acquisition.

(i) The right of use is subject to the right of the State to compulsory acquisition for certain public purposes.

(ii) The right of gift is merely an extension of the right of use.

(iii) The right of disposition is of comparatively recent development and did not exist so long as property was owned by the family as a whole.

(iv) The right of bequest is really in opposition to the right of inheritance. The modern tendency is to limit both these rights—especially the right of inheritance—by taxation and otherwise, in the interests of society and social justice.

There are many suggested justifications for the institution of private property. However the only basis nowadays recognized as valid is that of 'social utility'. But the acceptance of the test of social utility also involves acquiescence in various limitations of private property, if these are shown to be necessary in the public interest.

RENT

Economic rent should be distinguished from contract rent actually paid for the lease of land by tenant to landlord. The latter often includes other elements such as interest on capital, and may be influenced by monopoly, custom and philanthropy.

The *theory of (economic) rent* is best illustrated with reference to land. At any given time lands are graded into more paying and less paying. We first employ the better lands, and when more of the product is required, we obtain it in one of two ways: (i) either by working the same land more intensively, or (ii) by having recourse to inferior lands. In either case the return for a given outlay of capital and labour goes on decreasing, or in other words the cost of production goes on increasing. The price obtained must be such as to cover the highest cost. Otherwise it would not be incurred. It must cover the cost of cultivation at the margin (extensive or intensive). When the price obtained is higher than is needed to cover the costs in connexion with the employment of capital and labour, a surplus which is called rent is left above the margin. So much the landlord can exact from a tenant without trenching on the tenant's legitimate profits or remuneration. If he succeeds in extracting more, it is called 'rack-renting'. If he takes less, then the rent is to that extent enjoyed by the tenant.

The least profitable land in use is called the *marginal or no-rent land*. Rent is said to be something differential because it measures the difference between income from the marginal land and that from the lands above the margin. *Being itself the result of price*, rent cannot be one of the component elements of price. There are a few apparent exceptions to this, namely, (i) scarcity rent, (ii) rent of land in one use when diverted to another use, (iii) any tax (like the land revenue which is sometimes described as rent paid to the State) levied on all lands good or bad—all these do affect price. But these exceptions are only apparent because all these elements entering into price are in reality not economic rent although they may be called by the name 'rent'. Economic rent by its very analysis is shown to be a *price-determined* and not a *price-determining* factor. Economic rent must not be confused with the amount that may be actually paid to a landlord by a tenant, because this may be either above or below the true economic rent, as hinted above. The payment may also include such charges as interest on the capital invested by the landlord and so on. These items must be deducted from the gross rent in order to arrive at the net rent.

As economic rent depends on price, it follows that if the price rises, rent will rise; and if the price falls, rent will fall. *Economic progress* will lead to rise in rents in so far as it means increase of population and increase of demand. It will lead to a fall in rents in so far as it is attended by improvements in the arts of production. Rents in an old country may fall as a result of virgin lands in new countries being brought under cultivation.

The theory of rent can be shown to apply to other natural resources like *mines, fisheries, building-sites, etc.* As lands differ from one another in point of fertility so men differ in point of ability. The larger earnings of the more capable man as compared with the earnings of the less capable man contain an element of rent which may be called *rent of ability*. Temporary surpluses of the character of rent arise because, although the supply of other factors of production is not invariable like that of land, it is unchangeable for short periods. The name *quasi-rent* has been given to these surpluses.

It is true that economic rent proper is not *earned* by those who receive it. But receipts called rent popularly do not always consist of pure economic rent and nothing else. Separating economic rent from the other elements with which it is generally mingled presents great practical difficulties. Nor can nationalization of land be a solution, until we have decided the major question as to whether or not we wish to retain in substance our present order of society.

XIV

DISTRIBUTION: WAGES

§1. **The wages problem.**—The wages problem may conveniently be dealt with under the following headings :

- (i) Definition and scope of wages.
- (ii) Methods of remuneration : time and piece wages.
- (iii) Peculiarities in the action of demand and supply with regard to labour.

(iv) The theory of wages considered in its two aspects :
(a) Relative wages; (b) General wages.

§2. **Definition and scope of wages.**—Wages are the remuneration of labour as a factor of production, or the share which labour is entitled to receive from the national dividend. Commonly by 'wages' we understand the remuneration of hired labour. Strictly speaking, however, wages must be regarded as the remuneration of labour whether hired or not. Even independent workers like peasant proprietors and handicraftsmen receive wages. These form part of their total returns, although mixed with what they receive as interest on capital and as profits for the labour of organization, etc. On the same reasoning, the earnings of professional men like barristers and doctors partly consist of wages.

§3. **Methods of remuneration.**—There are two principal methods of paying wages.

(i) *Time wages or time earnings* are a fixed payment which a person gets for labour in any given unit of time, say, per hour, per week, per fortnight, per month, per year. Wages in this case are determined by the time during which the worker is occupied. The output due to the labourer is not measured for calculating the wages earned. In the Bombay cotton mills wages are paid once a month, and in Ahmedabad once a fortnight. Salaried officers in public and private employment generally receive wages on a monthly basis. Casual workers are paid daily wages. Farm labourers are sometimes paid on a yearly basis in India.

(ii) *Piece wages or piece-work earnings.*—Under the system of piece-work a person receives wages according to the results of his work, at certain fixed rates per unit of output, irrespective of the time taken by him. For instance, weavers in Bombay mills usually receive piece-work wages. Handloom weavers also generally receive piece-work wages when yarn is

supplied to them by outside capitalists. Time-work and piece-work wages, however, are not entirely unrelated to each other. Even when payment is by time, it is generally understood that a certain minimum quantity of work is to be turned out during the time taken as the unit; similarly, where payment is by output, it is understood that the given piece of work should be completed within a reasonable time.

The method of paying time-wages is the older of the two methods and is readily understood by all. It is certain and regular in its working and is particularly suitable in those trades where the work done cannot be accurately measured, as in the work of supervision or repairs. The principal defect of the system is a tendency to slackness on the part of the workers, as there is no special incentive to work hard. Under the system of payment by results, a good workman can hope to earn higher wages by showing greater efficiency. The system of piece-work wages is nowadays being increasingly applied, making possible a more accurate estimate of the cost of labour by the employer. The main defect of the system is the tendency on the part of the worker to do defective work in order to increase his output and thus earn high wages. Where, however, methods of production are standardized, as in the textile trade, the system of piece-work wages can be used to advantage. Other defects of this system are that it is apt to give rise to a feeling of jealousy among the workers and a certain degree of irregularity in the earnings.¹

§4. Peculiarities of demand and supply with regard to labour.

—As Marshall points out, certain peculiarities of labour on the demand as well as the supply side distinguish it from ordinary commodities and prevent a complete identification of the theory of wages with the theory of value.

(i) The first peculiarity is that the worker sells his work but retains property in himself; therefore, those who bear the expenses of rearing and training him receive but very little of the price that is paid for his service in later years. In the production of material goods, whoever incurs the expenses of production gets his return through the price obtained for them. Thus, the investment of capital in the rearing and early training of workers is limited not only by the means and the foresight of the parents, but also by their unselfishness. The children of wage-earners have generally to go without any special training during their early years, because the means of the parents are inadequate as are also their ability to realize

¹ Profit-sharing, already discussed in ch. viii, §10, may be regarded as one of the methods of remunerating workers.

the future advantages of such training and their willingness to sacrifice their own immediate interests to the ultimate interests of their children. This evil is cumulative and the decline in efficiency will be progressive from generation to generation.

(ii) The second peculiarity arises from the fact that labour is inseparable from the labourer. The seller of labour must deliver it himself. Mobility of labour and mobility of labourer are thus convertible terms. The seller of a commodity is not in this way inseparable from the commodity and the destination of the commodity. For this reason the influence of surroundings and associates on the character and strength of the worker become questions of great importance. Certain kinds of work may do great injury to the health and character of the worker.

(iii and iv) The third peculiarity is that labour cannot be stored or held up. Commodities can be held up by the producer, who may prefer to wait for more favourable prices. But a labourer cannot thus reserve his labour power. The time during which he remains idle is irrevocably lost. From this follows the fourth peculiarity, that the seller of labour is at a disadvantage in bargaining with the employer.

(v) Lastly, the growth of new supplies of labour is slow because of the time that is required to prepare and train labour. This applies particularly to skilled labour. The difficulty of adjusting supply of labour to demand for it is also due to the immobility of labour. Earnings in one kind of employment may be higher than in another. Nevertheless those who are already in a given employment tend to stick to it. The relative decline or increase in earnings in a particular occupation may affect the future supply of labour by a smaller or larger number of boys being trained for it. For the time being the supply available for each occupation is practically unalterable. Thus increase as well as reduction in the available supplies of labour is a slow process and often aggravates unemployment. The result is that the supply of labour in a trade in any one generation tends to conform to its earnings not in that but in the preceding generation.

Although we speak of a labour market where labour is bought and sold, as we speak of a market for a commodity, there are important differences between the two which must be borne in mind in expounding the theory of general wages.

THEORY OF WAGES

A. *Relative Wages*

§5. Nominal and real wages.—Wages are not the same in different occupations. A High Court Judge, for example, receives

very much higher wages than a clerk, or a factory worker. The causes of these differences fall into two classes: (A) those differences that tend to equalize the net advantages of different occupations, and (B) those differences of wages that cannot thus be explained.

(A) We shall first consider the distinction between nominal and real wages. If we merely consider the reward of labour that is received in the form of money, we are thinking of nominal wages. Real wages, on the other hand, refer to the income of the worker in terms of real benefit. (a) To arrive at real wages we must first of all consider the *purchasing power of money*. It is easy to see that the real benefit to the worker depends not on the money he receives but on the amount of goods and services he can purchase with it. A rise or fall in the price level, especially as regards the goods consumed by the working classes, is clearly significant from the point of view of the workers' welfare, and we have already explained how real wages are found by comparing the index numbers of prices (or of the cost of living of the working classes) to the index numbers of nominal wages.¹ The cost of living is now (September 1943) increasing owing to a sharp rise in prices; and although nominal wages have also increased, real wages have declined as the rise in prices is greater than the rise in the nominal wages. Before the present war, on the other hand, the fall in the price level and the cost of living being greater than in the nominal wages, real wages of labour in general increased (though the volume of employment diminished owing to the depression).

(b) Secondly, we must make allowance for any *other benefits* received by the worker, such as free boarding and lodging (e.g. in the case of domestic servants) or the right of grazing in the case of farm labourers, or the pensions received by public officials.

Even after making all these allowances we shall find that the wages in the various occupations differ. The following are some of the factors which account for the variations.

(c) *Trade expenses*.—Trade expenses are high in some occupations. In others there may be no trade expenses or they may be comparatively moderate. The carpenter working on his own account must spend on tools, the barrister must maintain an establishment. The factory worker, on the other hand, has generally no such expenses.

(d) *Expenses of preparation*.—Occupations which require a long and expensive training (e.g. medicine) will get compara-

¹ See ch. x, §28.

tively higher rewards, as without them the necessary expense and trouble would not be incurred.

(e) *Uncertainty of success*.—A higher speculative reward may really be equivalent to a smaller but certain reward. Some people are attracted by the possibility of very high earnings. Others are attracted by a modest but certain income. This is a matter of personal idiosyncrasy. It is probably true that *average* profits in business are remarkably low because many people who enter into it think only of the few striking successes and not of the many failures.

(f) *Irregularity of employment*.—The employment of labour is seasonal in some trades (agriculture, building) and irregular in others (dockyards, fishing). In such cases the high wages during the period of activity are due to the fact that there is no work for part of the year. The average wage for the year, however, is not higher than in the cases where employment is steady and continuous (e.g. in textile mills, railways).

(g) *Opportunities of supplementary earnings*.—These must also be considered, especially if we regard the family as the wage-earning unit. For example, in agriculture, there is scope for employment of women and children as well as adult males and, therefore, the wages of the latter are smaller than those, e.g. of dockyard workers, who have no comparable opportunities for adding to the family income.

(h) *Strain of work*.—The higher remuneration in some trades (e.g. metal casting and metal grinding) is due to the specially exhausting character of the work.

(i) *Incidental advantages and disadvantages*.—At least a partial explanation of differences in wages is afforded by the consideration that some occupations are naturally healthy and others must necessarily have a prejudicial effect on the physique of the workers. The miner working underground is naturally at a disadvantage as compared to the farm labourer working in the open air. Again, sometimes it is a question of social status. The so-called soft-handed occupations generally enjoy a higher status and attract a large number of people even when the wages in the manual occupations may be higher.

The above discussion will have made it clear that in comparing the real wages in different occupations we have to consider various other factors besides nominal wages. Thus only can we get an idea of the 'net advantages' of different occupations.

(B) It must not, however, be supposed that equal net advantages always mean equal wages. We must remember that even in advanced countries the choice of occupation is not en-

tirely free, and that mobility of labour from one occupation to another is far from perfect. Owing to the great inequalities in wealth-distribution and other hindrances, equality of opportunity still remains an aspiration rather than an achievement. As Taussig points out, society is thus divided into a number of non-competing groups, and wages are not wholly determined by 'net advantage'. This applies particularly to a conservative and caste-ridden country like India.

§6. **Wages of women.**—Women's wages are generally lower than men's because of their lower physical strength, inferior training and efficiency, restricted choice of career, and preoccupation with domestic duties. Moreover, women workers as a rule have ordinarily only themselves to support and often indeed they are themselves partially supported by others.¹ Again, women generally possess less bargaining power, not only because their choice of occupation is more limited than men's, but also because they are rarely so well organized as men. One of the results of the war has been to throw open to women a large number of occupations that were formerly closed to them.

B. General Wages

§7. **The Subsistence Theory of Wages.**—So far we have explained relative wages, or causes of differences in wages in different occupations. We will now consider the causes which affect the general rate of wages or causes which determine the share of labour as a factor of production.

The subsistence theory, also called the Iron Law of Wages, first propounded by the Physiocrats, states that, just as the normal value of a commodity under free competition is determined by its cost of production, so the value of the commodity, labour, is determined by *its* cost of production, i.e. the minimum subsistence expenses required for the support of the labourer and that of his family in order to ensure a continuous supply of labour. If wages exceeded this minimum, population would increase and with it the supply of labour, until wages were again at bare subsistence level. If, on the other hand, wages fell below the level there would be a reduction in population and therefore in the supply of labour, until wages were again raised to the subsistence limit. Thus this theory came to be bound up with the Malthusian doctrine of over-population. Lassalle used the subsistence theory in support of the

¹ Recent investigations in England, however, tend to show that the number of women workers with dependants is far larger than is usually supposed. Also quite a large proportion of the male workers are bachelors or widowers without dependants.

socialistic contention that under capitalism wages could not go higher than the subsistence level, the employers appropriating the whole of the surplus product created by labour. He gave a new title to the theory, namely, the Iron or Brazen Law of Wages, because of the supposed absolute rigidity of wages. This theory is no longer accepted because we now know by experience that a rise in wages is not necessarily cancelled by an increase in population. Some of it may be absorbed by a higher standard of life being established which will powerfully influence the rate of wages in future. Again, it is quite possible that by Trade Union action labourers may at least temporarily obtain wages higher than the subsistence level.

On the other hand, when starvation is the only alternative, wages *below* subsistence level may be accepted by the workers. Adam Smith, who assents to the subsistence theory, himself asserts that employers will give no higher wages than their *present* interests compel them. During the last hundred years or so, real wages have undoubtedly increased in the progressive countries of the west and have placed not only necessities for efficiency but also not a few comforts and even luxuries at the command of the working classes. In the modern statement of the wages problem the subsistence theory is transformed into the *standard of comfort theory*, wages being regarded as determined by the standard of living of the particular class to which a labourer belongs. This is, however, an abandonment of the subsistence theory rather than an amendment of it. Even in this form the theory is not free from difficulties. The conception of a living wage is very elastic and varies considerably even as regards workers in similar occupations. Moreover, the labourer cannot always stick to his standard of life when he has to choose between a lower standard and starvation. Further, if we regarded the standard of life as the cause and wages as the effect, it would follow that the labourer has only to adopt a high standard of living to secure high wages. Obviously this is not possible unless his efficiency is so increased as to admit of the high wages. In short, the fundamental defect of the theory is that it restricts itself to the supply side of the wages problem, ignoring altogether the demand side. The cost price of labour is only a factor indirectly determining the value of labour, the more positive factor in this case—as in that of the general theory of value—being the demand factor.

The subsistence theory, however, does contain an element of truth. It rightly points out that wages cannot for long fall below a certain minimum limit if the supply of labour is to be

maintained. Further, conditions may sometimes arise under which wages are largely determined by the mere level of subsistence, as in India at present.

§8. **The Wages Fund Theory.**—This theory applies the demand and supply theory of value to wages. It is an improvement over the subsistence theory in so far as it allows for the factor of demand which, as we saw, was neglected by the earlier theory. According to this theory, at any given time a certain wages fund is available, i.e. a determinate amount of capital is unconditionally destined for the payment of labour. There is similarly a determinate number of labourers who must work, whatever the wages. The wages fund divided by the number of workers gives us the level of wages. The wages fund thus constitutes the demand for labour, and the working population the supply of labour, and the former is distributed among the latter solely under the rule of competition. A natural corollary of this theory is that wages can rise only under two conditions: either the labourers must restrict their numbers, or the wages fund must increase. The latter is not controlled by the workers. The lot of the workers therefore depends on their numbers. Those who, like Mill, while advocating the wages fund theory also believed in the Malthusian theory of population, maintained that a rise in wages would in the end be counteracted by an increase in population. It was also argued that Trade Unions could not possibly succeed in raising *general* wages. For if wages rose in one industry, they were sure to fall in another because the total wages fund was fixed. One important criticism of this theory is that the wages fund is neither fixed nor unconditionally available for the employment of labour. The amount available for distribution as wages depends on the prosperous or depressed condition of the industry and the profit expected.

Again, it is easy to prove that mere changes in population are not followed by corresponding changes in the level of wages. Owing to famine or sickness, population may decline, but it does not follow necessarily that wages will rise. Nor does increase in numbers necessarily cause a fall in wages. Similarly with regard to capital, its supply may increase without wages rising, as in nineteenth-century England. After a crisis there is usually a glut of capital. Nevertheless instead of wages rising, they may fall.

But the most serious defect of the theory is that it ignores one vital element in the wages problem, namely the productivity of labour. Ultimately, the wages fund (or circulating capital) comes from labour itself. Wages are no doubt advanced

immediately from a reservoir of capital, but this reservoir is itself constantly fed by the products of labour pouring into it. The greater the efficiency of labour, the higher the wages are likely to rise without adversely affecting profits. Thus in newly-settled countries one often finds a rapid increase of population and a small volume of capital, and yet wages as well as profits are high—obviously because of the greater productivity of labour. A rise in wages does not necessarily result in an increased population as has already been pointed out. Population may increase, but if the aggregate wealth increases more than in proportion, wages are likely to rise rather than fall.

§9. The Marginal Productivity Theory of wages.—The earlier theories already considered were particularly defective in that they did not consider the influence of efficiency or productivity of labour in determining wages. There are a number of theories based on this general idea. Walker's *residual claimant theory*, for example, accepts it by implication. It states that labour is the 'residual claimant' of what remains after rent, interest, and profit have been paid. Everything that increases production should, therefore, be welcome from the standpoint of labour. This is a sound position, but it is more appropriate to call organization rather than labour the residual claimant. The theory hints at the true explanation of wages without furnishing it completely.

The *marginal productivity theory* is much more satisfactory in this respect. The emphasis came to be shifted from the concept of a 'fixed fund' to that of a 'continuous stream' of products turned out by labour, out of which, it was argued, wages were paid. A more optimistic turn was thus given to the wages theories, as it was shown that labour's reward depended upon its efficiency and varied in proportion to it. This new outlook was the result of the extraordinary expansion of industry in recent times and of increased specialization. It was realized that often it was more profitable to employ a highly-paid worker rather than a low-paid worker. The central idea of the marginal productivity theory of wages is that wages are determined by the productivity of labour. The theory may be stated thus:

In every business concern there is a point beyond which it will not pay the entrepreneur to engage more labourers. At this point there is a certain product ascribable to labour. Wages tend to be equal to this marginal product, i.e. the product of the least productive worker. The last labourer employed produces just enough to cover his cost to the employer. All the labourers being assumed to be of the same quality, they

will all receive the same wages, i.e. the wage representing the product of the marginal labourer. By the law of substitution, employers will take on workmen so long as wages can be paid from the price of their joint product and still leave normal profits and interest on capital. Competition will ensure that not less than this marginal product will be paid to labour, for then capital would enjoy more than marginal gains and would demand more and more labour to reap further wages. This competition for labour would raise wages until no special gain was to be made by its further employment. The marginal productivity theory¹ explains the phenomenon of wages on the same lines as the marginal utility theory explains the phenomenon of value in general, and needs to be supplemented in the same manner, i.e. by bringing the supply side into equal prominence with the demand side. Wages, that is to say, must not only be the monetary equivalent of the marginal productivity of labour but must also be equal to the cost of production of labour as determined by the standard of living. We assume that the labourer is prepared to take whatever action may be necessary to maintain his standard of living, so that enough can be earned for making a certain standard of life possible. If necessary, he will refuse to marry and bring up a family. The supply of labour will in this way diminish and wages will rise until they cover the cost of production (as determined by the standard of living), and at the same time express the productivity of labour at the margin.

In actual experience wages may differ from their level as determined by strict theory, because the assumptions on which the theory rests are incompletely realized in practice. We have to reckon with any number of disturbing influences which we conveniently bring under the term of 'economic friction'. These include such things as the imperfect mobility of capital and labour, the influence of custom and law and of Trade Union action, and so on. The theory, however, must not for that reason be dismissed as useless. It is valuable as it gives us a norm towards which wages do in fact tend to approximate.

§10. Trade Unions and wages.—Before the rise of Trade Unions, workers were at the mercy of employers who, as Adam Smith noted, 'are always and everywhere in a sort of tacit, but constant and uniform combination not to raise the wages of labour above their actual rate'. The effect of 'Trade Union

¹ Taussig prefers the term 'discounted marginal product' on the ground that not the whole of what labour produces is distributed as wages, but the product of labour *minus* a certain discount for interest, etc., as wages are paid in advance of production.—Taussig, *op. cit.*, vol. II, p. 214.

organization was to put labourers on a level with employers in point of bargaining power. It should be clearly understood, however, that Trade Union action can help labourers only in getting their due, i.e. the wage as determined by the marginal productivity of labour. It cannot secure a *permanent* rise of wages beyond this level because in that case the employer will get less than normal profits and will stop production and transfer his capital elsewhere.

Other things being equal, a strong Trade Union is in a better position for raising wages when the demand for the product is inelastic rather than when it is elastic, because in the former case the employer will be able to take the higher cost in wages out of higher prices charged to the consumer.

It may sometimes happen that while a certain type of labour is indispensable for the production of a commodity the cost of this labour forms but a small proportion of the total cost. In this case if the labour is strongly organized, it may succeed in securing a very high and permanent rise in wages, since the total cost is not thereby affected appreciably.

SUMMARY

Wages are the remuneration of labour, usually of hired labour. The term wages in economics has a wider scope than in popular usage, and includes salaries as well as part of a composite income received by independent workers such as the professional classes, peasant proprietors and artisans.

There are two principal methods of remunerating labour: (i) *Time wages* paid for labour employed during a fixed unit of time, and (ii) *Piece wages* according to the results of the labour (output). Each method has its own advantages and drawbacks.

Labour shows certain peculiarities on the demand as well as the supply side, so that the determination of wages takes place in a manner different from the determination of the prices of ordinary commodities: (i) The worker sells his work but retains property in himself. (ii) The mobility of labour and of the labourer are identical. (iii and iv) Labour is perishable: the seller of labour cannot hold his work in reserve and is therefore at a disadvantage in bargaining. (v) Lastly the adjustment of supply to demand is slow in the case of labour.

The theory of wages has two aspects: (i) *Relative wages*—Wages are different in different occupations partly because of the causes underlying the distinction between *nominal* and *real wages* and partly because of the division of society into more or less non-competing groups. *Nominal wages* mean the money wages received by the labourer, while *real wages* refer to the real income or real worth of his labour in terms of necessaries, comforts and luxuries. Real wages depend upon the following factors: the purchasing power of money, existence of other forms of payment besides money payment, differences as regards expenses of previous preparation, degree of uncertainty of success, regularity or irregularity of employment, opportunities of supplement-

tary earnings, strain and stress of work, and incidental advantages or disadvantages (e.g. higher or lower social status, etc.).

Society comes to be divided into non-competing groups owing to the expenses of education, influence of environment, differences in inborn ability, labour monopolies, general immobility of labour, etc. In the lower groups supply of labour is in excess of demand and wages are low; in the higher groups, wages are higher since the competition is more limited.

Women as a rule receive lower wages than men, because of custom, lower physical strength, smaller general efficiency, restricted choice of occupations, lack of training, and preoccupation with domestic duties. Moreover, women's wages are often of a supplementary character.

(ii) *General wages*.—The main theories dealt with are (a) the Subsistence Theory; (b) the Wages Fund Theory; (c) the Marginal Productivity Theory.

(a) *The subsistence theory* (also called the Iron Law of Wages).—Wages according to this theory are determined by the cost of subsistence of the labourer and his family and cannot in the long run either fall below this minimum or exceed it.

This theory neglects the possibility of a check to population in a progressive society in order to maintain a higher standard of life. It is not supported by actual facts, which show an improvement in the standard of life of the worker in the west. A modern refined version of the theory is the *standard of comfort theory* of wages. But in the new as well as in the old form, the theory is open to the objection that it neglects altogether the demand side of the wages problem.

(b) *The wages fund theory*.—This was for a long time regarded as the classical theory of wages and is a more precise statement of the popular law of supply and demand as applied to wages. Wages, according to this theory, depend on the one hand on the size of the wages fund and on the other hand on the number of workers. There is, however, actually no fixed wages fund unconditionally available for being applied to the payment of wages. This theory also ignores the factor of productivity or efficiency of labour, for labour like capital *earns* its own remuneration.

(c) *The marginal productivity theory*.—This theory supplies a serious deficiency in the earlier theories and duly stresses the influence of *productivity* of labour. The best known among the various productivity theories is the one which applies the concept of marginal utility to labour. If this theory is amended so as to bring the supply factor of labour into sufficient prominence it may be allowed to pass as the most acceptable authority. We must, however, remember that wages as actually paid are determined by a multitude of factors, such as Trade Union action, public opinion and custom. Two limits are suggested to the level of wages, an upper limit set by the productivity of the worker and a lower one set by the standard of life of the particular grade of workers. Wages vary between these two limits according to the relative bargaining strength of the employer and the worker.

Trade Union action can help labour in getting its due share, i.e. wages as determined by its marginal productivity. It cannot, however, go further and secure a permanent rise of wages beyond the limit of marginal productivity.

XV

DISTRIBUTION: INTEREST AND PROFITS

INTEREST

§1. **What is interest?**—We have seen how capital is one of the essential factors of production. The share allotted to it as its remuneration is called interest, which is generally stated as a percentage per annum on the amount lent. Interest may be described as the price for the use of capital. The higher the rate of interest, the greater the supply of capital and the lower the demand for it; the lower the rate of interest, the smaller the supply and the greater the demand.

§2. **How interest is determined.**—Interest is determined by the interaction of supply and demand in the usual manner. We have already examined the forces governing the supply of capital.¹ The total demand for capital is made up of (i) demand for productive purposes (e.g. purchase of a plough or bullocks for agricultural purposes), and (ii) demand for unproductive purposes (e.g. for meeting the expenses of a funeral, or when the State raises loans for carrying on a war).

But in normal times, in modern advanced countries, capital is mostly borrowed for productive employment and the productivity of capital is thus one of the principal determinants of its value, i.e. of the rate of interest.

Demand side.—Capital earns interest because more wealth can be produced with its aid than without. Borrowers of capital are prepared to pay interest because they realize its utility to themselves. The amount of capital available at any given time is limited, and competition among borrowers for this limited amount compels them to pay interest. This is the demand side of the matter.

Supply side.—The saving of capital, as already shown, involves the effort of postponement or waiting. During the period that capital is employed in further production of wealth, the capitalist denies himself the use of so much wealth in immediate consumption. Unless he receives some compensation (as interest), he would not undergo whatever sacrifice is involved in this forbearance. This is the supply side of the matter.²

¹ See ch. vii, §10.

² The 'agio' theory, as propounded by the Austrian economist Böhm-Bawerk, emphasizes the supply side of interest by stating that men prefer present to

§3. Marginal theory of value and interest.—Looking upon interest as a special case of the problem of value, it can be explained in terms of the marginal theory. Among the whole body of investors or lenders, there are some who are more willing to lend or invest and are therefore contented with a lower rate of interest; and there are others who are less willing and therefore require the inducement of a higher rate of interest. The aggregate amount of capital demanded cannot be made up without the co-operation of the less willing as well as the more willing. Under these conditions, so far as the supply side is concerned, the marginal investor's rate will be the market rate of interest.

Similarly, among the borrowers there are some who are more anxious to borrow and therefore prepared to pay a higher rate of interest, and there are others who are not quite so anxious and who will therefore offer a lower rate of interest. Under these conditions, so far as the demand side is concerned, the market rate of interest will be fixed by the marginal borrower.

The rate of interest will thus represent the coincidence of (i) marginal demand (or marginal utility, or marginal productivity) with (ii) marginal supply (or marginal cost of production). **§4. Interest and liquidity-preference.**—The rate of interest must depend, among other things, on the amount of money seeking investment at any given time. This in turn will depend on how much money is required by its possessors to be held in cash rather than tied up in investments of longer or shorter duration. Lord Keynes has introduced the term liquidity-preference in this connexion, which means preference for cash holdings as against investments. The greater the liquidity-preference, the smaller the amount of loanable money and therefore the higher the rate of interest. Liquidity-preference is influenced by a number of factors, such as the interval between receipt of income and its expenditure. For example, those who receive their wages once every month will need to hold more cash to tide over the interval than those who are paid every week. If the rate of interest is determined by liquidity-preference, the reverse also is equally true. If prevalent rates of interest are high, liquidity-preference will be low; if rates of interest are low, liquidity-preference will be high.

future goods, i.e. there is an agio on present goods. By lending money, they force themselves to wait for future goods instead of using the money on present goods. The rate of interest thus measures the 'agio' or premium on present goods and the discount on future goods. This is a good enough explanation of interest so far as it goes. But it does not go far enough because it ignores the demand side. Interest would not be paid unless the capital on which it is paid were productive.

§5. **Gross interest and net interest.**—We have already learnt that in the same market at the same time there cannot be more than one price for the same commodity. So that where capital can be easily shifted from one use to another, it ought to yield the same interest in every use. If in one case it yields, say, 6% and in another 10%, its supply will decrease in the first use and increase in the second. The rate will go up in the first and go down in the second, and eventually a uniform rate of, say, 7% will be established in both the uses. In actual experience, however, we find that the yields in different kinds of investment vary. This we explain by saying that the *net interest*, i.e. the return for the use of capital as such, is the same in every case—the variation being due to such elements as more or less risk, greater or less inconvenience, and more or less labour of management. If by investment in Cash Certificates we get 4% and on bonds issued by a municipality we get 6%, this is because the security in the first case is greater than in the second. Assuming that the average investor regards investment in Cash Certificates as perfectly safe, the 4% yield on them will stand out as net interest. The 6% derived from the municipal loan would be accounted for thus :

| | |
|----|--------------------|
| 4% | net interest |
| 2% | insurance for risk |

Total 6%.

The *sahukar* or the pawnbroker lending small amounts to numerous clients charges comparatively heavy rates. An important reason for this is the natural desire of the lender to recompense himself for the extra risk and the extra worry involved in realizing petty amounts from a large number of impecunious and improvident borrowers.

§6. **Interest and progress.**—It was John Stuart Mill's idea that with economic progress, the rate of interest must go on progressively diminishing, because with increasing wealth, saving would be easier and more and more abundant. However, progress also means increase in human wants to which there is really no limit. To satisfy these wants more and more capital will be wanted. We cannot say that the demand for capital will grow less fast than its supply, and therefore we cannot assert that economic progress must necessarily bring about a lowering of the rate of interest. It is also clear that a low rate may be due to decline of enterprise and a consequent fall in the demand for capital. Periods of acute economic depression are often marked by low rates of interest.

Owing to the growth of security in modern times, there

has undoubtedly been a lowering of rates as compared with the medieval period. In the old days rates were usurious because of poor security, and borrowing was made mainly for the relief of distress rather than for productive purposes.

§7. Ethics of money-lending.—In medieval Europe money-lending (usury) was regarded as a deadly sin. This was because the borrowers were as a general rule men in distress, and money-lending looked like taking an unfair advantage of one's fellow-beings who happened to be in difficulties. Religious bigotry further emphasized the prejudice against money-lending, as the lenders were mainly Jews and the borrowers Christians. All this, however, has now changed. As money began to be borrowed for purposes of commerce and industry in which the borrower made handsome profits, the prejudice against money-lending gradually weakened, until it has now disappeared altogether. Loans are now made mostly for productive purposes and are paid for out of the extra gains which the loans make possible. Nor is it any longer true that the class of lenders is mainly composed of rich persons and the class of borrowers of poor persons deserving of special sympathy and protection.¹

Even in these modern days, however, we find among socialists those who are moved to indignation by the spectacle of a certain number of people living entirely on the interest from their investments without doing any work to earn their livelihood. But if these people have themselves saved the money, they have already undergone a sacrifice in the past for which they are now earning their reward. It may, however, be that some of them have not themselves saved their wealth but have inherited it from those who had acquired it. Is it right that they should be permitted to enjoy the fruit of other people's labour? So long, however, as the institution of private property continues we must recognize not only the right of enjoying the wealth which one has acquired oneself but also the right of bequeathing this wealth.²

Some socialists would go to the length of proposing the complete abolition of private property. They urge that capitalists as a class make gains wholly disproportionate to any service they render and that they wield too great an influence in so-

¹ This, however, still holds good in the case of India, where owing to the small progress of modern industrialism the major portion of the borrowing is for unproductive purposes and the borrowers as a class are impecunious and improvident. But the *sahukar* has always been regarded as indispensable and is a respected member of the village community. The reasons why he has to some extent come into bad odour in recent times have been explained in *Elements of Indian Economics*, ch. III, §18.

² See ch. XIII, §§8, 9.

ciety as at present organized. This, however, raises the large question of the possible organization of society on a fundamentally different plan—a question which cannot be fully discussed here. We have, however, in the next chapter,¹ indicated the general features of the rival organization as proposed by socialists and discussed its pros and cons.

PROFITS

§8. Analysis of gross profit.—The remuneration to the entrepreneur (organizer, enterpriser or venturer) who supplies the fourth factor in production, namely organization, is called profits. The work of organization consists, as we have already said, in (i) the efficient grouping of the other three factors of production, land, labour and capital, and (ii) taking the risks associated with business enterprise.

In ordinary language, by the term 'profits' we simply convey in a loose manner the excess of money return over money cost (gross profit). And the money cost may sometimes not include all the other elements that must strictly speaking be allowed for in calculating the amount which remains as profits. Those who have organized a business and are running all the risks in connexion with it may have themselves contributed some of the necessary (i) 'land' (natural resources); (ii) capital; and (iii) labour (labour of directing, inspecting, management—work for doing which they might have had to pay a salary to an outsider). From his gross receipts the entrepreneur must deduct the returns attributable to (i), (ii) and (iii) because these are not profits proper, but rent, interest and wages of management respectively.

Other items that must be deducted from gross profits are depreciation, maintenance and insurance (against fire, etc.).

§9. Net or pure profit.—What remains after all these deductions are made can alone be called 'profits' (net or pure profit), if we wish to use the term scientifically and accurately. Profits proper are, as already stated at the very outset, a return for the work (whoever does it), of (i) directing and organizing the business, and (ii) taking the risk of loss. Some risk is of course always inherent in modern business, because the goods produced may after all not be wanted by the public or the prices may turn out to be lower than expected, and so on. The entrepreneur can insure his business against some of the risks, and in this case, the premia he pays to the insurance companies will figure as part of the cost he has undergone. But there are always other risks which cannot possibly be insured against.

¹ Ch. xvi, §§18-20.

The position of the employer is different from that of the owners of the other factors which he hires and employs. Whether he gains or loses, he has to pay the rent and interest and wages for the use of these factors. He has to pay for the services of these factors before he has marketed the goods and knows whether he has made a profit or a loss. *He takes for himself whatever surplus remains after the payments to the other three factors have been made.* Hence he is sometimes described as the residuary legatee. One of the principal things which distinguishes profits from payments to land, labour and capital, is that, *whereas rent, wages and interest are comparatively fixed and certain, profits are fluctuating, uncertain and speculative.* Sometimes profits may sink to zero and in fact may be negative, which never happens in the case of rent, wages and interest.

§10. Profits and cost of production.—Do profits enter into cost of production and therefore determine the price of goods? The answer to this is that normal profits or profits *earned by the representative firm* do enter into the cost of production. Average ability of management and other average advantages are here assumed. Where the ability or other advantages are exceptional, a surplus over marginal profits will be enjoyed. This surplus due to superior capacity, superior luck or superior opportunity is of the nature of rent. We may say that the position of the entrepreneur or firm which is below the average has no significance in fixing the price because such businesses will sooner or later be pushed out in the competition with their better-placed rivals.

§11. Causes of differences in normal profits.—The variations in profits may be (i) apparent, or (ii) real. They are only apparent when, for example, the comparison is not between similar things. In one case certain elements which really should have been excluded as not belonging to profits proper may have been included; whereas in the other case care may have been taken to separate these elements from pure profits.

(In joint-stock companies we generally find these various elements differentiated to a large extent. So that we know that what the debenture holders get is pure interest and what the ordinary shareholders get is profits. The directors get wages of management in the form of a regular salary in addition to their share of profits which they get as shareholders.)

When the profits in one kind of business are really different from those in another, these differences can generally be referred to as differences as regards-degree of risk, difficulty of management, expenses of preliminary training, etc.

§12. The dynamic theory of profit.—J. B. Clark, an American economist, has suggested that the phenomenon of profit shows itself only under a dynamic state of society, i.e. under conditions of constant change such as characterize present-day civilized society. If nothing ever changes, i.e. if population remains the same, if there are no variations in commodities demanded, if methods of production remain the same, all producers will be producing with the same degree of efficiency, prices will equal costs of production as a result of competition and there will be no profits if by profits we mean the surplus remaining after meeting costs of production. Criticism of this analysis is twofold. In the first place, it does not apply to the actual state of society which is dynamic and not static and the dynamic character gives opportunities to the man with ideas who stands to reap extra gains by being the first to use them in industry. Secondly, this account of profits ignores the truth that they represent the combined remuneration for different types of service some of which are implied even under the assumption of a perfectly changeless society (see §9 above).

§13. The entrepreneur not a parasite.—It is a mistake to suppose that the entrepreneur is a kind of parasite on industry and that profits are a kind of robbery. *Without profits there would be no enterprise, and without enterprise there would be no progress.* As Nicholson points out: 'Enterprise, in the highest forms, is a combination of exceptional ability with exceptional risk. The ability is of the kind that defies definition; it is analogous to the genius of the soldier as distinguished from the knowledge of the military student. . . . It is enterprise of this kind that has played the greatest part in economic progress; it is the necessary practical complement to the discoveries of the creative genius in science.' According to Marshall, society on the whole gets the services of entrepreneurs very cheap, because although some of them (e.g. Henry Ford) seem to make heavy profits, others sustain heavy losses and on an average profits are very modest.

SUMMARY

INTEREST

Interest is the remuneration or the price for the services of capital. The supply of capital involves the effort of postponement or waiting which would not be forthcoming without the inducement of interest. The demand for capital is based upon its uses in production (although some of the demand is also for unproductive purposes). The rate of interest represents the coincidence of marginal demand for, and marginal supply of, capital. Lord Keynes has latterly propounded a theory of interest in which prominence is given to what he calls

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'liquidity-preference' (i.e. the degree in which possessors of money prefer to hold it in cash) as a main factor governing interest. Net interest tends to be uniform in all uses of capital. Gross interest is made up of net interest plus an addition which may be necessary to cover extra risk, labour or inconvenience.

Economic progress is associated with two sets of opposite tendencies: one making for a decrease and the other for an increase in the rate of interest. By stimulating and facilitating savings and promoting security it increases the supply of capital and so far leads to a fall in the rate of interest, while on the other hand, economic progress implies expansion of human wants and therefore an increased demand for capital and a higher rate of interest.

The old medieval prejudice against money-lending gradually disappeared as loans came to be advanced for productive enterprises which paid their way. There is today a better appreciation of the need and justification for interest. Interest is a necessary and equitable return for the sacrifice involved in most saving. Interest no doubt is often obtained on inherited capital, but so long as we agree that private property is on the whole necessary we must tolerate interest being earned on such capital. The view sometimes expressed by socialists that the interest paid to capital is necessarily at the cost of labour is untenable.

PROFITS

Profit is the remuneration of the organizer, being the reward for his work of bringing together and co-ordinating the other three factors of production and assuming risks which are inseparable from business.

Profits as ordinarily understood are *gross profits*, and contain besides pure or *net profit*, other elements such as interest on capital, rent on land and the wages of labour (superintendence) supplied by the organizer himself. Allowance must also be made for depreciation, maintenance and insurance.

While some risks are insurable and the premia paid to cover them appear as part of the costs, other risks must be assumed by the entrepreneur personally. He may be regarded as a residual legatee entitled to the surplus, if any, left after all the other shares (wages, interest and rent) have been paid off. Profits, therefore, unlike other shares are necessarily fluctuating and uncertain.

Profit made by the average or representative firm may be called *normal profit*. This enters into the cost of production because production would not be continuous unless the price covered normal profit as well as other costs. Extra profits (i.e. over and above normal profit) made by the superior firms, conducted by men of exceptional ability, are, however, of the nature of rent (rent of ability) and do not enter into costs of production.

Some variations in profits are apparent, others are real. The former arise owing to the different methods of calculating profits. The latter are the result of varying degrees of risks, difficulties of management, etc. The dynamic theory of profits regards profits as an incident of change and suggests that they cannot arise under static conditions. This theory, however, unduly narrows down the definition of profits. In any case it is not applicable to actual conditions of society under which the only thing certain is that everything is uncertain and liable to change.

For economic progress enterprise is essential, and profits are the indispensable reward of it.

XVI

DISTRIBUTION : SOME GENERAL PROBLEMS

§1. **Scope of the chapter.**—In this chapter it is proposed to discuss the following three general problems suggested in connexion with the distribution of wealth.

- (i) Problems of Labour in relation to Capital.
- (ii) Inequality of wealth and income.
- (iii) Socialism.

PROBLEMS OF LABOUR IN RELATION TO CAPITAL

A. Industrial Disputes

§2. **Causes of industrial disputes.**—The three main problems of labour that arise in relation to capital in the modern economic organization are : (A) Industrial disputes, (B) Trade Unions, and (C) Labour legislation. We shall deal with them successively.

Industrial harmony and full co-operation between workers and employers, 'the two coefficients in a joint result', are essential for ensuring and maintaining industrial prosperity. It is, however, a regrettable feature of the present economic system that there is growing and serious labour unrest in many countries, as shown by the increasing frequency of industrial disputes, strikes and lockouts.

(i) Most of the strikes and lockouts are concerned with *wages*. In the period immediately following the war of 1914-18, the rise in prices and the cost of living, together with the economic upheaval and the general malaise created by the war, produced a large crop of strikes aimed at securing increases in wages. After a short interval of comparative peace, the economic depression from the year 1929 onward was again marked by a recrudescence of strikes. Employers attempted cuts in wages which were keenly resented and resisted by Trade Unions.

(ii) Another bone of contention between labourers and employers is the *length of the working day*. Labourers are naturally anxious to make it as short as possible and, equally naturally, employers are anxious to have it as long as possible in order to get full value in work for the wages paid. The working-class ideal is an eight-hour day. In India also long hours of work have frequently provoked strikes and called for the intervention of the State to reduce them by legislation.

(iii) The *fear of unemployment* or of under-employment has often led to opposition on the part of the working classes to the introduction of labour-saving devices and of rationalization of industry, and to the adoption of *ca'canny* tactics (i.e. deliberately doing work slowly so as to make it last longer). The right to work or to maintenance is usually an important item in working-class demands.

(iv) The *growing class-consciousness* among the working classes and socialistic propaganda have resulted in their pitching their demands higher and higher. They are no longer content with increases in wages. Besides improvement in social and economic status, they demand some share in the profits and a voice in the management. According to Guild Socialism, the ultimate ideal of the working class is that the producers or workers in each industry should be organized into guilds of producers and should thus control production. This is the usual meaning of industrial democracy. The Syndicalists and the Marxian Communists represent even more extreme forms of working-class agitation. The example of Russia and vigorous communist propaganda in other countries constitute at present probably the most powerful influences tending to unsettle labour, even in comparatively backward countries like India.

§3. Need for industrial peace.—We have already stressed the importance of industrial harmony for the maintenance of industrial prosperity. Frequent stoppage of work caused by strikes and lockouts inflict injury on the workers as well as on the employers. Workers lose their wages, and have to fall back on Trade Union funds, i.e. their own money. Nor is the loss and suffering confined to workmen and employers alone. The disorganization of production often causes the most serious inconvenience to the general public also, e.g. in the case of strikes in public utility services like railways. Perhaps the most tragic part of many industrial disputes is that when finally an agreement is arrived at, it is often on lines suggested at the beginning of the dispute so that its unnecessary prolongation merely increases the sacrifice of all concerned and feelings of embitterment and hostility. It is, therefore, important to take steps (i) to prevent the occurrence of industrial disputes, and (ii) to settle them quickly if they do occur.

§4. Prevention of industrial disputes.—The existence of efficient organizations on either side—sound Trade Unions of workers and Employers' Associations, competent to speak for their respective sides—will prevent the occurrence of sporadic strikes and lockouts and the formulation of grievances *after* rather than *before* going on strike.

Another much discussed method in recent years is the joint control of industry by workers and employers organized into Joint Councils, such as those established in Great Britain on the lines recommended by the Whitley Committee of 1917. This committee advocated for each industry (i) Workshop Committees in individual firms; (ii) District Councils; and (iii) a Joint (National) Industrial Council for the whole industry.

(i) The *Joint Workshop or Works Committees* represent workers and employers in an individual establishment and are responsible for fixing the conditions under which work is carried on. These committees are intended to some extent to overcome the disadvantages arising from the fact that under modern conditions the old personal relationship between operative and employer has disappeared.

(ii) The *District Councils* are intended to link up the Joint Works Committees with

(iii) *Joint Industrial Councils* of employers and employees representing the whole industry. The Whitley Councils were to meet regularly and to discuss not only questions of wages and hours, and other conditions under which work is carried on, but also broader issues such as education and welfare. The whole Whitley scheme is voluntary in character and has tended to promote greater harmony with favourable reactions on production and efficiency. It is however handicapped by two difficulties. First, the scheme being voluntary, the agreements entered into by these councils and committees cannot be legally enforced. Secondly, the organization of the Whitley Councils cuts across that of the Trade Unions. The latter are mainly organized by trades and not by individual workshops.

The plan of profit-sharing has already been discussed in a previous chapter. It has not fulfilled its early promise, and to-day the enthusiasm for it has greatly abated. It has been adopted, however, on a considerable scale in France.

§5. Conciliation and arbitration of industrial disputes.—We may next consider the machinery for settling industrial disputes after they occur.

The essence of conciliation lies in joint conference, and success depends on the existence of responsible and well-organized associations of employers and employees. Adjudication of a dispute that has come to a head may be called arbitration, which is usually effected by the help of outsiders. Conciliation and arbitration may be effected through private or public agencies. Again it may be voluntary or compulsory. Voluntary public arbitration exists in Great Britain, and India has followed this example, while the best-known examples of compulsory arbitra-

tion are found in New Zealand and Australia. In Great Britain the beginnings of a policy of settling industrial disputes can be traced to the Conciliation Act of 1896, which was permissive in character. Conciliation or Arbitration Boards could be registered on application to the Board of Trade, which was empowered to appoint conciliators and arbitrators for bringing together the parties to the dispute. A further step was taken when, under the Act of 1911, an Industrial Council, consisting of a joint panel of twenty-six members equally representative of employers and labour and a permanent official, was appointed. The Council was to inquire into trade disputes and was to be regarded as supplementary to the organization set up by the earlier Act. The Industrial Courts Act of 1919 established in Great Britain machinery for the voluntary arbitration of industrial disputes by setting up a standing Industrial Court consisting of an independent Chairman and other independent persons and an equal number of representatives of employers and employees, all appointed by the Ministry of Labour. Both the parties to a dispute may by mutual consent refer any dispute to the Court which, after making inquiry and taking evidence, makes a full report. But the voluntary principle is still observed and the decision of the Court is not binding. Public opinion is regarded as the decisive factor in settling disputes, and the main function of the Court is to help the clear framing and discussion of the issues regarding costs, profits and wages. The Indian Trade Disputes Act of 1929 closely follows the English model. As already mentioned above, the most outstanding examples of compulsory arbitration through the agency of the State are furnished by New Zealand and Australia. Strikes and lockouts are forbidden. Either employers or employees may submit their disputes to the Arbitration Tribunals whose decisions are binding. One or several legally trained persons constitute these tribunals, which may also have some members who are well acquainted with the particular industries.

The most serious objection to compulsory arbitration of industrial disputes is that it discourages settlement by the disputants themselves and encourages the tendency to depend upon some external authority for the preservation of peace. Compulsory arbitration also does not appear to be suitable to a highly industrialized country like England where the technique of production is always changing.

B. Trade Unions

§6. Trade Union functions.—A modern Trade Union, unlike the medieval Craft Guild, is entirely an association of wage-

earnings or workers in the same or allied trades. It discharges two main groups of functions. In the first place, it serves as a Mutual Benefit or Friendly Society and pays allowances to its members when in difficulties caused by sickness, accident, unemployment, superannuation, etc. It thus tries to make its members independent of public or private charity.

A far more important function performed by a Trade Union is that it safeguards and promotes the economic interests of its members as against employers. Its chief aim is to secure for its members higher wages, shorter hours of work, safe and pleasant conditions of work, and to defend individual workers from arbitrary and unjust treatment by their employers.

The need for combination among workers and for collective bargaining under modern economic conditions is obvious. As Marshall puts it, 'a single large employer is a combination in himself', and unless he is met by a combination of workers there is little chance that the worker, bargaining in his individual capacity, will secure a fair wage. That workers should combine is all the more necessary nowadays as employers have their own powerful associations, and there is a great deal of justification for the claim made by Trade Unions that they make economic friction work for the labourer instead of against him. The chief weapon used by Trade Unions in discharging this function is the strike.

Trade Unions also perform a third function, which may be called the political function, by financing and running electioneering campaigns for securing the election of their own representatives to the legislature.

§7. The Trade Union movement.—The modern Trade Union movement is essentially a product of the conditions created by the Industrial Revolution in England. For a long time the legal position of Trade Unions was very unsatisfactory. The Combination Laws of 1799 and 1800 prohibited all combinations of workers as being criminal conspiracies in restraint of trade. Although these restrictions were repealed in 1824, Trade Unions still remained unrecognized, were without a proper form or constitution, and liable to be sued for loss to the employer caused by strikes. The Trade Union Act of 1871 removed these handicaps and provided for the registration of Trade Unions. The Acts of 1906 and 1913 further improved their position, so that Trade Union funds are now protected from liability for losses caused to employers by the action of their members. The position of the British Trade Unions has been greatly strengthened in recent years. To no small extent this is due to the wholehearted manner in which they co-operate

ted with the Government during the critical period of the 1914-18 war.

The early Trade Unions were organized on a craft basis (e.g. the Amalgamated Society of Engineers, all its members belonging to the same profession though drawn from many trades : railway, steel and iron, etc.). The 'Industrial Union' has recently come into greater prominence.¹ It has brought within its fold all the workers belonging to different grades engaged in industry (for example, the Miners' Federation, and the National Union of Railwaymen in Great Britain). The craft union is of a horizontal type and promotes professional spirit and solidarity. The danger, however, is that the employer may play off one union against another. The industrial union is the vertical type of combination, and is better fitted to promote workers' interests generally. This type is naturally welcomed by the guild socialists who favour control of industry by workers.

Whatever the type of union, there has been a striking movement in favour of amalgamations and federations on a national basis. The best known and most effective national organization in Great Britain is the Trades Union Congress which holds annual sessions, its most powerful organ being the General Council which has close ties with the British Labour Party.

The Trade Union movement in India is still in a condition of infancy.²

§8. The influence of Trade Unions.—The effects of the Trade Union movement have been a matter of some controversy.

In favour of the movement it can be said that it is an indispensable organization for securing a fair share of the national dividend to the working classes and preventing the inequalities of wealth from being cumulative in their effects.³ By holding out for standard rates of pay, Trade Unions protect the workers' standard of living. A well-organized and strong Trade Union, conducted with a due sense of responsibility, smooths the course of economic activity by effecting peaceful settlement of disputes with employers and by promoting mutual good feeling. It also helps in bringing about peacefully necessary

¹ The early policy of Trade Unions was to admit only skilled workers as members. The 'New Unionism', which dates roughly from the end of the nineteenth century, has brought unskilled persons and women within the scope of Trade Unions.

² Its history and present position are dealt with in *Elements of Indian Economics*, ch. iv.

³ See Taussig, *op. cit.*, vol. II, pp 316-7.

changes in wages in either direction, and is not opposed to the efficient and economical management of industry. Trade Unionism, however, must be judged mainly by its influence on the character of the workers.¹ It found many workers debased and oppressed and gave them self-respect and protection, and even today there are a number of 'sweated' trades in which such help is badly needed. Trade Unionism strengthens the moral character of workers and promotes the necessary *esprit de corps* among them. These influences are reflected in a better standard of industrial efficiency and a permanent increase of wages with no adverse effects on profits or on industrial enterprise.

The chief drawback of the movement is that, in their anxiety to better the lot of their members, Trade Unions are apt to concentrate on a particular rate of wages and a particular group. They are inclined to think that higher wages in general can be secured by limitation of output and restriction of competition. In doing so they clearly overlook the fact that ultimately the only source of a large and permanent advance in wages is increase in productive efficiency and in the total output of goods and services. This explains the reluctance, if not the actual hostility, of Trade Unions and their leaders to accept labour-saving devices² and their adoption of ca'canny tactics; the attitude shows that the fallacy of a fixed wages fund still has a hold over the working classes. Another complaint against Trade Unions is with regard to their policy of restricting membership and attempting to establish a labour monopoly. This tendency is specially noticeable in the case of unions of skilled workers. It is sometimes possible for strongly organized Trade Unions to secure very high wages for their members in particular trades, partly at the cost of the employers and partly at the cost of the general community. But this cannot fail ultimately to produce adverse reactions on the particular trades themselves.³ High wages may also compel employers to introduce labour-saving devices to which the workers are naturally opposed for fear of unemployment.

Another objection often raised is to the insistence of Trade Unions upon a standard minimum wage for all members of the union, irrespective of the varying efficiency of individual members. It is argued that this leads to the *minimum* wage becoming the *maximum* and prevents masters from giving higher wages to the more efficient workers. It may work out disadvantageously to workers themselves in some ways because, for example, employers will not be able to give any work to

¹ Marshall, *Elements of Economics of Industry*, p. 388

² Taussig, *op. cit.*, vol. II, p. 317

³ See also ch. xiv, §10.

men past their best years on wages below the standard rates, although the men may be glad to accept lower wages. At the same time the standard wage constitutes the very backbone of the system of collective bargaining and it is difficult to see how it could be dispensed with without making Trade Unions ineffective.¹ What should be attempted is fair standardization which furthers social interest, while rigid standardization injures it.

A further danger is the possibility of militant Trade Unionism seeking to paralyse the social and economic life of the community by too frequent a use of the general strike under syndicalist influences (as was threatened in England in 1926). This can, however, generally be held in check by a well-educated and well-organized public opinion.

The Trade Union movement has on balance conferred large benefits on both the working classes and the general community, the gains far outweighing the losses. Responsible Trade Unions, conducted soberly, can only result in social good and deserve the support of the public.

C. Labour Legislation

§9. Need for labour legislation.—We have, in this and in the previous chapters, made a reference to the evils of modern industrialism and the factory system. These evils—long hours of work, particularly for children and women, insanitary and otherwise unsatisfactory conditions of work in the factories, absence of protection against dangerous trades and of compensation for injuries received during the course of employment, the truck system (paying wages in kind)—first appeared in England in the wake of the Industrial Revolution. They were for a long time left unremedied, because in the first place there was widespread public ignorance of their existence. Secondly, even when they came to light, Parliament was reluctant to intervene owing to the predominance of the *laissez-faire* philosophy so fervently preached by the classical economists. The capitalists and manufacturers were naturally averse to any regulation, and stood out for full freedom of enterprise. Even the old Elizabethan Labour Code regulating apprenticeship and wages was removed from the Statute Book in the name of freedom early in the nineteenth century. The Combination Laws of 1799-1800 prevented any concerted action being taken by the workers themselves for the betterment of their conditions. Gradually, however, the public conscience was aroused in the matter and it was realized that a policy of *laissez-faire*

¹ Todd, *op. cit.*, p. 197.

was unsuitable when applied to children and women and in general to the individual factory-worker or wage-earner who, left to himself, was far too weak to protect himself. Philanthropists, social reformers and socialists all joined in a strong and persistent agitation asking for State intervention, which was also favoured by the growing Trade Union movement. The rise of the Labour Party, the awakening created by the war of 1914-18 and the establishment thereafter of the International Labour Organization (1919) as a branch of the League of Nations have all helped the cause of labour legislation.¹ Modern labour legislation covers a wide range of subjects, some of which are reviewed below.

§10. Factory and Mines Acts.—Labour legislation in England began with Factory Acts,² which regulated the employment of children and women by imposing restrictions on the age of employment of children and on hours of work of both children and women. Later on, the employment of women underground in mines, and during the night, was prohibited. Certain precautions for the safety of the operatives during work, such as the fencing of machinery, etc., were also prescribed, and factory inspectors were appointed to enforce the provisions of these Acts. For a long time no attempt was made to limit the hours of work of adult males, as it was thought that they could very well look after themselves, especially as collective bargaining was rapidly replacing individual bargaining. The limitation of hours of work of children and women, however, indirectly led to a reduction in the hours of work of men, because in many trades where children and women were employed their help was essential to men, and also because of the influence of example. Modern Factory Acts contain elaborate provisions about hours of work, holidays, rest pauses, shift systems, sanitary arrangements and fencing of machinery; and they have undoubtedly succeeded in greatly improving the inhuman conditions that prevailed in the early days of the factory system in England and other countries which came under the influence of the Industrial Revolution. The successive shortening of the working day has not justified the fear, of employers, who apprehended a reduction in output. On the other

¹ For labour legislation in India, see *Elements of Indian Economics*, ch. iv, §23.

² The first Factory Act, passed in 1802 in England, was very modest in its scope applying as it did only to Poor Law apprentices employed in cotton factories. Other Acts followed in 1819, 1843 (regulating work in coal-mines), 1847 (which introduced a ten-hour day for women and children), 1867 and 1908. The last-mentioned Act (Miners' Act) introduced an eight-hour day in coal-mines.

hand, there has been a gain in efficiency. The working-class ideal today is an eight-hour day, which has been already realized partially in Great Britain. If introduced gradually there is much to be said in its favour from the point of view of both employer and worker. Anyhow, the demand of the worker for reasonable and 'cultured' leisure is becoming irresistible.

§11. **Workmen's Compensation Acts.**—The second important direction in which labour legislation has progressed is that of compensation to workmen for injuries received in the course of employment. The modern factory and machine system of production is liable to produce frequent mishaps and accidents. In England the Employers' Liability Act of 1880 and the Workmen's Compensation Act of 1897 made provision for the payment of a scale of compensation to workmen, or their heirs in case of fatal injuries. The risk of loss to employers has been largely covered by insurance, the employers paying premia to get their men insured against accidents. This legislation has made the factory owners more careful about defective machinery and about securing prompt medical treatment for injured operatives. It has also helped to make the labour force more stable and more contented.

§12. **Sickness and unemployment insurance, old age pensions and maternity benefits.**—The third main item of labour legislation relates to provision against other hardships. A workman may fall sick and in consequence lose his wages or even his job, or he may be periodically thrown out of employment or become unfit for work through old age. Women workers also need rest from work some time before and after childbirth. England and Germany (until the rise of Hitler) adopted comprehensive schemes of national insurance which brought about a substantial improvement in the economic and social status of the worker. The National Health Insurance Act of 1911 in Great Britain, administered by the Ministry of Labour through Employment Exchanges, provides for the compulsory insurance of the worker against sickness and unemployment on a contributory basis, the employer, the employee and the State all sharing the burden thus imposed.^a The Act was of an experimental character so far as unemployment insurance was concerned and its scope was extended in 1916 and 1920. The Old Age Pensions Acts of 1908 and 1911 provided for the grant of a pension by the State through the Ministry of Health to all persons above seventy, provided their means were below a certain small minimum. In the interest

^a See ch. xviii, §7, for further particulars.

of women workers, most western countries have introduced maternity benefits and prohibited the employment of women for some period before and after childbirth.

§13. The Beveridge Plan.—The famous Beveridge Plan proposes radical changes in all the existing social services in England. It takes abolition of want after the present war as its primary aim, and includes as its main method compulsory social insurance, with national assistance and voluntary insurance as subsidiary methods. Among its important features is its proposal to unify social insurance in respect of contributions—that is to say, enabling each insured person to obtain *all* benefits by a *single* weekly contribution on a *single* document. The scheme aims at achieving social security by co-operation between the State and the individual. The State is to offer security to the individual but at the same time leave room and encouragement for voluntary action by each individual to provide more than the minimum for himself and his family.¹

§14. Legal Minimum Wage, Truck Acts, etc.—Lastly, in some countries special legislation has been passed to regulate wages in certain selected industries. For example, the Trade Boards Act of 1909 in Great Britain provided for the fixing of minimum rates of wages in certain 'sweated' trades (such as lace-finishing and ready-made clothing) by Trade Boards consisting of an equal number of representatives of employers and employees and some additional independent appointed members. The scope of the Act was extended in 1913 and again in 1918. The Coal Mines Minimum Wage Act of 1912 applied the same principle to wages of miners under certain circumstances. In this connexion, reference may be made to the draft convention on the subject of a statutory minimum wage adopted by the International Labour Conference in 1928. It contemplates the creation of a wage-fixing machinery in the case of trades or parts of trades (and especially homeworking trades) in which no arrangement exists for the effective regulation of wages by collective agreement or otherwise, and wages are exceptionally low. It may be added that the wage-fixing Trade Boards in Great Britain are set up by the Ministry of Labour after a preliminary investigation. In those trades where powerful Trade Unions exist they can very well take upon themselves the work of Trade Boards. In certain countries like New Zealand, Australia, and some States in the U.S.A., a general national minimum wage has been established by

¹ For a useful summary of the Beveridge Plan, see articles in *The Times of India*, 17, 18, 20, 25 and 27 May 1943.

legislation. It is obvious that it is by no means easy to fix a national minimum wage even for one country, which will neither be too low to serve its purpose, nor so high as to constitute a serious burden on industries, and which, while suiting all industries alike, will adapt itself readily to changing social and economic conditions.

Truck Acts exist in several countries today, prohibiting employers from paying wages in kind. Before they were passed, serious abuses existed. Workers were compelled to buy their requirements from the employers' shops at unduly high prices. The quality of the goods stocked also left much to be desired. The Truck Acts make payment of wages in cash compulsory.

The foregoing survey of labour legislation is convincing proof of the new liberal attitude of the State and of public opinion towards the working classes. This attitude is fully justified on grounds of social and economic efficiency as well as on humanitarian grounds.

INEQUALITY OF WEALTH AND INCOME

§15. Causes of inequality.—Even the most casual observer of the economic organization of today will not fail to be impressed by the striking inequalities in the distribution of property and income which it permits. This is also borne out by statistics relating to the incomes assessed under the Income Tax Acts and those relating to properties taxed under the Probate Laws. Taussig suggests that distribution both of wealth and income has roughly a pyramidal form. 'To put the analogy more carefully, its form is like an inverted peg-top—the lowest range small, then a very large extension and thereafter steady shrinkage, as the highest point is reached.'¹ These inequalities of wealth, which are particularly glaring in the old countries, have been the target of violent and bitter socialistic criticism.

The causes of inequality of wealth may be considered under two main heads: (i) Differences in inborn ability or natural endowment; (ii) Environment and inheritance of property.

Differences of inborn ability are and have always been an important factor in determining the distribution of wealth. The abler workers earn higher wages than the less able. The exceptionally capable business man earns much higher profits than the man of average ability. One point is quite clear; so long as such differences in respect of inborn gifts continue to operate—and there is no reason to believe that they will cease to operate in the future—inequalities of earnings and posses-

¹ Taussig, *op. cit.*, vol. II, p. 253.

sions are inevitable and will persist even though the other causes of inequality were to be altogether eradicated.

The feeling against inequality would not, however, have been so poignant had natural causes alone been in operation. We know that inequalities are perpetuated and aggravated by artificial factors such as the influence of environment and inheritance of property. The environmental influence tends to be particularly strong in conservative caste-ridden societies like Indian society. But it is by no means negligible even in the progressive advanced countries of the west. The influence of example and nurture, heredity and custom, makes vertical mobility of labour difficult if not impossible. Every person tends to remain in the same social group to which his parents and forefathers belonged, so that those born in wealthy families secure better opportunities than those born in poor families, and the better start they get enables them to maintain and improve their superior social status and economic condition.¹

Closely connected with environment and opportunity is the factor of property and its inheritance. One of the principal causes of inequalities of wealth is the fact that there is great variation in the amount of property received by different persons by way of inheritance and bequest. Some receive huge amounts and others receive little or nothing. Variations of law and custom are also of considerable importance in this connexion. For example, the system of primogeniture, under which only the eldest son inherits the real estate of his father to the exclusion of younger brothers, would obviously intensify inequality of wealth and promote its concentration in a few hands. The principle of equal inheritance among all sons—as in India—on the other hand, would lessen such inequalities. A factor allied with inheritance and bequest of property is the inequality of saving. As Cannan points out :² 'It is the rich who save most, both in absolute amount and in proportion to their incomes, so that saving does not mitigate inequality arising from other causes; it aggravates it.'

Thus private property, inheritance and bequest, and saving are largely responsible for the existing inequalities of wealth and income.

§16. Evils of inequality.—Such glaring inequalities of wealth tend to create grave social discontent and promote inter-class hatred and jealousies.³ Wealth so unequally distributed fails

¹ We have already explained the causes of differences of earnings in different occupations in ch. xiv, §5.

² *Op. cit.*, p. 186.

³ cf. 'The riches of the rich intensify the poverty of the poor. . . . Not what

to yield the maximum social satisfaction which it would yield if it were rationally distributed. It also prevents the full utilization of the latent intellectual capacities of all classes of the population. Last but not least, possession of large incomes means almost tyrannical power enjoyed by a favoured few over thousands of their fellow men. There may be a few instances of enlightened millionaires like Henry Ford showing a laudable sense of moral and social responsibility. But the common run of wealthy employers cannot be depended upon to regard large incomes and possessions as a social trust to be administered for the benefit of the community.

§17. **Remedies.**—All inequalities of wealth are obviously not of the unjustifiable sort. Those that reflect differences of ability cannot be condemned socially. Large fortunes honestly acquired by sheer force of superior merit and ability are, in the words of Seligman, 'not a tax on the community but a draft on Nature'. It is, however, highly desirable to eradicate or at least to minimize as far as possible inequalities that are the result merely of environment, opportunity, property and heredity.

The State can do much to equalize opportunity for all by providing for the proper upbringing of all children, by free and compulsory education, by giving scope for special talent wherever it may be found, by removing social and caste barriers, and by taking all such measures as may tend to improve the economic condition of the masses.

Inequalities arising from property and inheritance and bequest present a more difficult problem. The drastic socialistic solution of abolishing all private property in land and capital would overshoot the mark and give a definite setback to progress. The spur of private property is still necessary to call forth the best exertion of man's abilities and energies.

What is more feasible is limitation of private property, partly by not recognizing it in the case of certain social-utility enterprises like railways, supply of electricity, water, gas, etc., and partly by imposing restrictions on inheritance and bequest, taking care, however, to leave intact the stimulus to saving. Reference has already been made to death duties and inheritance taxes. If they are not excessive and do not trench upon capital, they are useful in checking the growth of inequality. Progressive taxation of large incomes and expenditure on the amelioration of the numerically larger section of the society,

he has, but what he thinks he might have and ought to have, determines a man's state of mind. Hence, the worker of today is discontented and derives not the slightest comfort from the knowledge that in any earlier age, his real income would probably have been less than it is.'—Clay, *op. cit.*, pp. 431-2.

also secure a similar purpose.¹ To aim at the establishment of a flat equality of wealth and income would be running grave social and political risks. This is, however, not to justify the present position as regards distribution of wealth and property. In many ways it is admittedly irrational and inequitable, and urgently calls for amendment in the interests of social peace and economic progress.

Let us repeat in conclusion that inequalities of wealth are to some extent necessary to ensure social progress by stimulating individual initiative and enterprise. But change is required both as to the manner in which they are allowed to arise under present conditions and as to their extent.

SOCIALISM

§18. **What is socialism?**—Socialism may be described in the words of Bertrand Russell² as 'the advocacy of communal ownership of land and capital in place of the present capitalistic system based upon individualism and private property'. Socialism aims at the establishment of a co-operative commonwealth, socialization of all means of production, and regulation of distribution according to some method of joint control for securing the common good.

Modern socialism was born as a protest against the evils of the Industrial Revolution and of the existing social order which can make such evils possible. While welcoming the great technical and industrial advance achieved under the capitalistic system, socialists urge that the system itself is radically vicious and that it should be replaced by another social order which would avoid the evils while retaining the advantages of the capitalistic system. It is true that with the exception of Soviet Russia, which has adopted communism—the most extreme form of socialism—no State has yet been reorganized on socialistic lines. Nevertheless socialistic propaganda has most powerfully affected the trend of economic thought and public opinion. It has been responsible for the enlargement of the economic functions of modern Governments and has deeply tinged the legislative programmes of all advanced countries.

§19. **Socialist doctrine.**—Socialistic propaganda falls into two classes: (i) negative or destructive, and (ii) positive or constructive.

(i) *In its negative aspect* it is concerned with exposing the various defects of the existing individualistic system, especially its wastefulness and aimlessness. Every producer acts

¹ See ch. xvii, §9.

² *Roads to Freedom: Socialism, Anarchism and Syndicalism*, p. 23.

on his own estimate of the community's needs. There is no co-ordination of effort among the different producers, so that too much or too little may be produced. Also, profit being the sole motive influencing the producers, articles which are really harmful to the consumers are often produced to satisfy unhealthy or perverted tastes. A special grievance of the socialists is that, under the existing economic system, the reward of the worker is disproportionately small in relation to his contribution to the social product. According to the labour theory of value maintained by Marx—who may be regarded as the exponent of modern socialism—while the whole productive result is due to the labourer, he gets back only a small part of what he produces—just enough for his bare subsistence—the whole surplus above this being taken by the capitalist. The theory has been strongly criticized on the ground that it totally ignores the contribution made by the other factors of production. In its extreme form it has been abandoned by many modern socialists, though their contention remains that the workman fails to get his due under the present system. Private property, the socialist argues, is the outcome of the original aggression of the strong against the weak, and it makes possible the continued exploitation of the weak. The advent of machinery and the Industrial Revolution have immensely increased the power of the capitalist over the workman, who has come to be completely dependent upon the capitalist.

(ii) The socialists are not agreed among themselves as regards the methods of establishing a socialist commonwealth. Some of them are evolutionary socialists, like the State socialists or the Fabian socialists in Great Britain. They believe in the gradual introduction of socialism, and advocate constitutional methods through the acquisition of greater control of the political machinery. Others, like the Marxian communists, favour the forcible overthrow of capitalist society and the establishment of the proletarian State. The syndicalists advocate 'direct action', that is, general strikes calculated to paralyse the capitalistic society and the State. They wish to abolish the State and establish Trade Union government. The Guild socialists support self-government in industry, which is to become the basis of social organization. They desire, however, to retain the State for certain purposes such as the maintenance of peace and order and the protection of the economic interests of the consumer.¹

¹ For an interesting study of the various schools of socialism the reader is referred to C. E. M. Joad, *Modern Political Theory*; and F. J. C. Hearnshaw, *A Survey of Socialism*.

On the constructive side, the socialists are weaker than in their destructive criticisms of the present economic system, and there is great variation in their proposals for social reconstruction. For example, the State socialists would leave the management of all industrial enterprises to State control through managers and labourers paid and controlled by Governmental departments. Private property would be allowed to remain in articles of consumption but not in the instruments of production. The communists, however, are not prepared to recognize any form of private property (if they can help it). They want the community as a whole to be the direct owner of all things.

Probably the most acute disagreement among socialists is regarding their formula for the distribution of wealth. The communist formula is, 'From each according to his capacity, to each according to his needs.' Others advocate equality of wages based on the performance of equal amounts of labour, allowing for the attractiveness or the disagreeableness of each occupation. The majority of socialists advocate wages based on efficiency to be determined by a hierarchy of officials. This plan, which involves the difficulties inherent in a centralized bureaucracy, is not favoured by the advocates of Guild socialism and Municipal socialism, who prefer decentralization and functional democracy.

All socialists, however, emphasize the idea of service, and have a faith 'that men and women are capable of giving and of sustaining more effective service than capitalism is able to demand from them under the impulsion of motives largely social'.¹ Socialists believe that it is possible to build upon the impulse which makes people work willingly and well for the common benefit and without any thought of pecuniary reward.

§20. A critical estimate of socialism.—The chief achievement of socialism is undoubtedly its merciless exposure of the principal evils of the present system. The socialists have directed a never-ceasing fire of criticism against the regime of unrestricted competition, the injustice and waste which it involves and the formidable danger to the worker and the community in general from powerful capitalistic combinations which have arisen as a result of excessive competition. The socialists have also on the whole succeeded in securing considerable support for their contention that under the capitalistic system, the worker fails to get his due share in the distribution of wealth. Further, they have called the attention of all thinking men

¹ G. D. H. Cole, *The Intelligent Man's Guide through World Chaos*, p. 585.

to the present glaring inequalities of wealth and opportunity which the system tolerates. It must also be admitted that if the barren creed of *laissez-faire* has now been abandoned in practice by all enlightened Governments in the world, the credit for this must go largely to the socialists. By denouncing exploitation in every shape and form, socialism has succeeded in arousing the communal conscience, and its appeal for self-sacrifice and social service has been powerful and effective. It has thus stimulated several much-needed reforms in the shape of anti-trust legislation, Factory Laws, labour insurance, statutory minimum wages, arbitration and conciliation of industrial disputes, progressive taxation, extension of suffrage, extension of education, improved sanitation and municipal operation of social utility services. Under socialistic influences the State has been fulfilling more effectively than ever before, its duties as an agent for the realization of the collective ends of the community.

Like all partisans, however, socialists of every school have been guilty of exaggeration both in decrying the evils of the capitalistic system and in praising their own particular brand of socialism. In dwelling upon the fact that under present conditions the worker does not get his proper share of wealth, they are perhaps not wrong. But they have been proved to be entirely wrong in suggesting, as most of them have done, that the worker's lot is getting steadily worse. There is no gain-saying the fact that the industrial worker of today enjoys a much better and stronger economic position than he did before the Industrial Revolution. Again, their indictment of capitalism is often based on fallacious reasoning, as in the case of the labour theory of value. We have also noticed the lack of harmony in their plans for social reorganization and their notions of a proper basis of wealth-distribution. Nor has their insistence on the actual efficacy of the motive of social service in place of the motive of profit succeeded in carrying conviction. It is probably true that the motive of social service has not been properly developed under the capitalistic system. But in the best of circumstances it is very uncertain how far social service would effectively replace self-interest as a stimulus to action, so long as human nature remains what it is. The average man is neither so anxious to work nor so zealous about the common welfare as socialism demands, and if the spur of self-interest is removed the likelihood is that the volume of production will shrink seriously. We must also not forget that most of the socialistic plans require for their working the establishment of a vast bureaucracy. This will bring in red-tapeism

and the tyranny of the bosses, which are highly detrimental to individual enterprise and self-help.¹

As regards the methods by which socialists desire to usher in the new order, the communists regard revolution as indispensable and have used it with apparent success in Russia. However, the Russian experiment is too recent and we know far too little of it to form any settled opinion. Once the existing order is thrown into the melting-pot, nobody can predict what exactly will take its place. For this reason and because violence begets violence and reaction, it would seem necessary to stress the need for caution and deliberateness in introducing changes in the social structure. The Fabian socialists, who prefer evolution to revolution, can rightly claim that, following their peaceful constitutional methods, they have been instrumental in securing a good deal of permanent, if not very startling, advance in many directions. That this is after all merely social reform and not socialism proper, is a criticism which will trouble only doctrinaire socialists. But most people will be satisfied so long as definite progress is being gradually achieved, and will not light-heartedly destroy a fabric of civilization which, with all its faults, represents an advance on anything that has preceded it, and which has been built up by centuries of painful human effort.

SUMMARY

PROBLEMS OF LABOUR IN RELATION TO CAPITAL

1 *Industrial disputes*—Growing industrial unrest is one of the most regrettable features of the present economic system. Its main causes are the desire of the workers for better pay, a higher standard of life, better conditions of employment as regards hours of work, their anxiety to secure greater economic stability, the growing consciousness among the working classes of their rights, the spread of socialistic and communistic ideas, the growth of solidarity among the working classes in general, the increasing truculence of working-class organizations, and the economic and political upheaval which followed the war of 1914-18.

Industrial harmony is obviously a necessary pre-condition of economic prosperity. Frequent strikes and lockouts inflict serious harm on workers, employers and the community at large. Some organization is therefore necessary (i) to prevent industrial disputes, and (ii) to settle them amicably when they do occur.

The first object may be achieved by the establishment of efficient organizations both on the side of the employers and on that of the employees, competent to speak for their respective sides. Joint councils (on the lines of the

¹ Guild socialism, which seeks to establish control by local bodies, is less open to objection on this score than State socialism or collectivism.

Whitley Committees) representative of both the parties, for fixing and securing the observance of conditions of work and certain modifications of the capitalistic system, such as profit-sharing, are useful in this connexion.

Industrial disputes when they do occur can be dealt with by private or public conciliation. Arbitration is usually voluntary, although in a few countries like Australia there is compulsory public arbitration, strikes being altogether prohibited.

B. Trade Unions.—Industrial workers are organized today into Trade Unions. A Trade Union serves as a mutual or friendly society and helps its members who may be in distress. Its more important function is that it safeguards and promotes the economic interests of its members as against the employers, through collective bargaining and by resorting to strikes, if necessary.

The Trade Union movement is essentially the product of the conditions created by the Industrial Revolution in England. It has passed through several phases. To begin with, Trade Unions were illegal and were looked upon as criminal conspiracies. Later they ceased to be regarded as criminal, but were still unrecognized by law. Later still they were legalized and gradually acquired protection, privileges and immunities.

Trade Unions are organized either on the *craft* (professional) basis, or on the *industrial basis*. The latter type is at present gaining ground. Whatever the type, Trade Unions are being amalgamated and federated into nation-wide organizations often exercising great influence on the whole labour movement and the country's politics. Well-organized and responsible Trade Unions are highly beneficial to the working classes as well as to the community in general. Their chief danger comes from their particularist tendency and policy of restriction of competition and limitation of output. Another danger is their alliance with the idea of the *general strike*, particularly favoured by the syndicalists. On balance the Trade Union movement has undoubtedly conferred great benefits both on workers and on society at large.

C. Labour legislation.—The principal evils of the modern industrial system, such as unduly long hours of work, exploitation of the labour of children and women, intolerable conditions of work in factories and absence of any systematic relief to workers in times of economic stress, were for a long time left unredressed. Owing to the spread of better knowledge about the abuses of the factory system, the quickening of the public conscience and more effective labour organization, it has been possible to impose a considerable check on these evils through suitable labour legislation. The scope of such legislation has been continuously on the increase, and today most advanced countries like England possess a complete labour code affording many-sided protection to the worker. A great stimulus was imparted to such legislation by the establishment of the International Labour Organization of the League of Nations.

The main items of labour legislation are: (i) Factory and Mines Acts; (ii) Workmen's Compensation Acts; (iii) Sickness and Unemployment Insurance, Old Age Pensions and Maternity Benefit Acts; and (iv) Legal Minimum Wages and Truck Acts.

(i) Factory and Mines Acts regulate the hours of work, age of employment, lay down rest pauses, holidays, conditions in factories and mines, and prohibit the employment of children and women in certain trades (e.g. for underground work in mines) and during certain hours (at night).

(ii) Workmen's Compensation Acts make employers liable for injuries

received by workers in the course of employment, and provide for a scale of compensation according to the nature of the injuries received.

(iii) The third main item of labour legislation is the statutory provision against certain disabilities to which the worker is exposed, such as sickness, unemployment, old age, and, in the case of women workers, childbirth. National insurance schemes on a contributory basis have been introduced in Great Britain and elsewhere to deal with sickness and unemployment. Old age pensions are paid by the State in a few countries. Maternity benefits are provided for by legislation or otherwise in many countries.

(iv) In some countries minimum wages have been prescribed by law, and representative Trade Boards have been established for fixing wages in sweated industries where, owing to lack of labour organization, excessively low wages prevail. A general (national) legal minimum wage has been adopted in a few countries like New Zealand and Australia.

Truck Acts (prohibiting payment of wages in kind and insisting on cash wages) also exist in England and some other countries.

The Beveridge Plan proposes radical changes in the existing social services in England and seeks to achieve complete social security within the framework of the present capitalistic society and by co-operation between the State and the individual.

INEQUALITY OF WEALTH AND INCOME

Striking inequalities in the distribution of wealth are a characteristic of the modern capitalistic organization. These inequalities are partly due to differences of inborn ability and partly to social organization, the system of laws governing the inheritance and bequest of property, and to the factor of saving. Inequalities not due to differences of ability promote social discontent and inter-class hatred, prevent the maximum possible human satisfaction and happiness being realized and the fullest utilization of available talent, and lead to the exercise of tyrannical power by the few over the many. The inequalities can and should be mitigated by State intervention aiming at equalization of opportunity, e.g. through free and compulsory education and through every possible device for discovering and encouraging talent wherever it may be found. Private property no doubt causes and aggravates inequality, but because of its great value as a stimulus to exertion, it is desirable to maintain it. It is, however, possible to limit it without bringing about adverse reactions. For example, certain important social utility enterprises may safely be nationalized or socialized. Restrictions may be placed on inheritance and bequest, and taxation and public expenditure may be so manipulated as to make distribution more equitable and socially beneficial.

SOCIALISM

Socialism aims at the establishment of communal instead of individual ownership of all means of production (land and capital) and State control of distribution with a view to securing the common good.

Socialistic propaganda has a *destructive* and a *constructive* side.

In its destructive aspect it is concerned with pointing out the various failures of the capitalistic system, its wastefulness, its absence of co-ordination between production and consumption, its harmful effects on consumption and human welfare due to the exclusive domination of the profit motive; the great-

est fault of the capitalistic system, according to socialists, is that it makes possible the exploitation of the worker by the capitalist. The worker gets far less than he contributes and the capitalist far more. *Vis-à-vis* the capitalist, the worker's position is hopelessly weak, so that more and more the weak are exploited by the strong.

Among socialists there is much difference of opinion as regards (i) the exact character of the new social organization which is to replace the present individualistic system; and also (ii) as regards the methods to be used for realizing the ideal.

With regard to the first point, the subject on which there is serious divergence of opinion is that of private property. Some socialists would like to abolish it altogether. Others would allow private property only in articles of consumption but not in the instruments of production. Further the varying ideals about distribution of wealth are indicated by the formulas accepted by different schools of socialists such as 'From each according to his capacity and to each according to his needs', 'Equal wages for equal amounts of labour', 'Wages according to efficiency', etc.

Other matters of controversy are (a) the position to be assigned to the State (some advocating its complete abolition and the establishment of Trade Union government in its place); (b) the nature of the administrative machinery which would run the new organization—whether it should be a centralized bureaucracy or a functional democracy with decentralization as its watchword.

(ii) As regards the methods to be adopted for establishing the new order, the broad distinction is between (a) the evolutionists like the Fabians who believe in gradualness and constitutional means; and (b) the revolutionists like the Marxian communists and the syndicalists.

The weak spots in the socialistic argument are its excessive reliance on the motive of social service as the spring of human action and its faith in the efficacy and honesty of the bureaucracy which is postulated in almost every type of organization proposed by the socialists of the different schools.

On the other hand, socialistic propaganda has been most successful in pointing out the evils of *laissez-faire* capitalism. Its influence has been great in enlarging the scope of Governmental activity in economic matters and in introducing a great volume of much-needed legislation affecting economic relations and aiming at protecting the weak from exploitation by the strong. It has quickened the public conscience and enormously hastened the pace of social betterment.

PUBLIC FINANCE

§1. Nature and divisions of public finance.—In this chapter, it is proposed to deal with public finance or the economics of Government, which, as pointed out in Chapter I, constitutes the fifth division of economics.

Public finance 'is concerned with the income and expenditure of public authorities, and with the adjustment of the one to the other'¹ There are two main divisions of Public Finance, (i) Public Income or Revenues; and (ii) Public Expenditure. Two more branches may be added to these: (iii) Public Credit or Debt, and (iv) Financial Management or Administration. The last branch forms part of the study of politics and administration and need not be considered here.

With the growing activities of the State the principles and problems of public finance are naturally receiving increasing attention at present.

§2. Three different systems of public finance.—There are three distinct systems of public finance.

(i) *The system of predetermined income*, the expenditure being adjusted to the income. This system is characteristic of private economy. Persons and institutions with fixed incomes must adopt it. When land revenue, with its more or less fixed yield, was the only important source of revenue in India, for example, the Government was forced to adopt this system.

(ii) *The system of predetermined expenditure*, revenue or income being adjusted to expenditure. This is typical of most modern civilized countries, and the Indian financial system is gradually assuming this character. Under this system the executive Government, acting through its Finance Department, prepares its budget (or a forecast of expenditure) upon the basis of public needs conforming to a certain level of urgency. The budget so prepared is submitted to the Legislature which is asked to vote taxes and funds sufficient to meet these public needs.

We cannot, however, draw a hard and fast line between the rules of public economy and private economy, for it is clear that in the long run the State, like the individual, must cut its coat according to its cloth. While useful State expenditure is illimitable, the taxable capacity, or the income of the citizens

¹ H. Dalton, *Principles of Public Finance*, p. 3.

from which the public revenues are derived, is limited at any given time.

(iii) Lastly, there is the *commercial system* under which neither income nor expenditure is predetermined. Both are allowed to vary from time to time as may be found convenient. This system is followed in business whether conducted by a private or public agency.

PUBLIC REVENUE

§3. Sources or classification of public revenues.—The sources of public revenues fall into four main classes :

(i) *Direct revenue* from State property in land and forests and commercial undertakings. This is non-taxation revenue, which the State like any private person derives from its properties and business by charging prices for specific services rendered and by the sale of commodities, as in the case of postal rates, or railway fares for the use of Government railways, or charges for the supply of water through the Irrigation Department. So also is income from lands directly owned by the Government or from shares and other investments made by the Government (as in the case of Suez Canal shares held by the British Government).

(ii) *Derived revenue*, i.e. derived by the State from the income of its citizens in the form of (a) taxes and (b) fees, e.g. licence fees.

(iii) *Anticipated revenue* in the form of public borrowings, which in essence constitute an anticipation of future revenue, out of which interest charges are met and repayment of the principal is effected. The whole question of public debt is treated separately.¹

(iv) There is a miscellaneous class of public revenues comprising such items as (a) tributes and indemnities, (b) fines, (c) profits from currency and note issue, and (d) gifts, etc.

§4 Definition and characteristics of taxation.—We shall now proceed to consider taxation revenue and the principles underlying a good tax system.

'A tax is a compulsory contribution of the wealth of a person or body of persons for the service of the public powers.'² This definition indicates four main characteristics of a tax :

(i) First, a tax is a *compulsory* payment. As previously remarked, the State levies taxes in its sovereign capacity, determining the amount of the tax, the persons affected, etc.

(ii) Secondly, a tax being a compulsory *deduction* from the wealth of a person necessarily involves sacrifice.

¹ See §§30-4.

² C. F. Bastable, *Public Finance*.

(iii) Thirdly, a tax is taken from the *wealth* of a person. But wealth may be taken not only in the form of money but also of services (e.g. military service) and commodities (e.g. land revenue was often paid in kind in olden times in India).

(iv) Fourthly, in the case of taxation proper, there is no direct *quid pro quo*, i.e. no exact equivalence between the tax paid by the individual and the service rendered to him by the State or benefit received by him from the State. The *service of public powers or general utility* is the predominant element, and its value is neither calculable nor is it the same for every citizen.

§5. **Fees and rates as distinguished from taxes.**—It is on this ground mainly that certain payments charged by the State in the shape of fees and rates should be distinguished from taxation proper. A *fee* is a voluntary payment for service rendered by the State in the public interest, but conferring a specific advantage on the person paying it (e.g. education fees or registration charges). A *rate* is a voluntary payment or price paid to the State for certain specific commodities or services (e.g. the postal rates, or railway fares or the water rate). Many of the payments made to a Municipality or a Local Board are rates rather than taxes, while most of the payments made to a Government belong to the category of taxes.¹

§6. **Canons of taxation.**—There are four main canons or principles of taxation as stated by Adam Smith in his *Wealth of Nations*, namely, (I) Equality, (II) Certainty, (III) Convenience, and (IV) Economy. To these, later writers have added three more : (V) Productivity, (VI) Elasticity, and (VII) Simplicity. The first of these, namely the canon of *Equality*, raises some fundamental issues of a controversial character.

§7. (I) **Equality of taxation.**—Smith stated the canon of equality thus : 'The subjects of every State ought to contribute towards the support of the Government, as nearly as possible in proportion to the revenue which they respectively enjoy under the protection of the State.' This canon is found to contain the germs of several distinct theories of what constitutes equitable or just taxation such as : (i) the equality of sacrifice theory, (ii) the faculty or the ability theory. Other theories of lesser importance are (iii) the benefit theory, and (iv) the social function of taxation theory.

Owing to the great inequalities of wealth prevailing in modern society, the question What is a fair basis of taxation? has been a subject of acute controversy. Obviously, equality of taxation cannot be attained through equality of payment. Differ-

¹ See Nicholson, *op. cit.*, vol. III, pp. 261-5.

entiation between the rich and the poor citizens is necessary to attain justice in taxation. Adam Smith suggested the basis of ability of the taxpayer to contribute to the State. Now the term 'ability' is capable of a twofold interpretation, subjective or objective, according as emphasis is laid on the inconvenience or sacrifice involved in the payment of the tax (subjective), or on the ability or faculty of the taxpayer as indicated by his property or income, i.e. according to his taxable capacity (objective). We thus get two main principles, one underlying the equality of sacrifice theory and the other underlying the faculty theory, sometimes called the ability theory. We shall examine these separately.

§8. The equality of sacrifice theory.—This was first emphasized by John Stuart Mill, who maintained that every taxpayer should be called upon to make the same or equal sacrifice. It is generally agreed that in income-tax a certain minimum income should be free, i.e. exempted from taxation; otherwise taxation of small incomes would lead to the sacrifice of necessities of life, while that of large incomes would mean sacrifice only of superfluities or luxuries. The sacrifice imposed on the poor would thus be far heavier than that imposed on the rich. We find that in most income-tax systems there is a minimum tax-free income. Thus in India incomes below Rs. 2,000 a year are not taxed. The same idea makes some people advocate the exemption of taxes on food-stuffs, salt and other necessities of life.

§9. The theory of progressive taxation.—The principle of equality of sacrifice is also made the basis of progressive taxation. It is argued that money has varying degrees of utility to the rich and poor, and that as the income increases its marginal utility falls.¹ Proportionate taxation, i.e. a fixed percentage of income, say 2%, contributed as tax to the State would mean greater sacrifice for the poor than for the rich. Progressive taxation, under which the *rate* of taxation increases with the size of the income, is therefore essential for equalizing sacrifice. Most modern tax systems have adopted this principle, and important taxes like the income-tax and death duties are often heavily graduated. For instance, in India, the rate of income-tax (in 1943) which is 9 pies in the rupee on incomes between Rs. 1,501 and Rs. 5,000, rises to 15 pies on incomes between Rs. 5,001 and Rs. 10,000 and so on until it reaches 30 pies on incomes of Rs. 15,001 and upwards. The surcharge and super-tax is similarly graduated. The socialistic parties in various countries prefer progressive taxation to proportional taxation as

¹ See ch. iv, §6.

one method of reducing inequalities of wealth by taxing the rich more heavily and spending the tax proceeds for the amelioration of the condition of the masses.

§10. Criticism of progressive taxation.—The principle of progressive taxation has been criticized on the following grounds :

(i) The standard is essentially subjective and therefore cannot be other than arbitrary. We have not as yet evolved any accurate method of measuring sacrifice involved in the taxation of large and small incomes.

(ii) Also the utility of a given income is not the same to all individuals.

(iii) We are not justified in discriminating between the rich and poor in taxation since we do not make any such discrimination in our ordinary economic transactions.

(iv) Progressive taxation strengthens the motives for evasion.

(v) It encourages extravagance, weakens the desire to save and leads to emigration of capital.

(vi) Lastly, it is not the purpose of a tax system to alter the existing distribution of wealth. Its main function should be financial, i.e. to raise a certain amount of revenue, enough to enable the State to meet its needs.

There is some force in these objections, but not so much as to weaken appreciably the case for progressive taxation. A certain element of arbitrariness in taxation is inevitable, and the tendency towards evasion will be there in all circumstances, though experience shows that it is possible to minimize it by suitable measures. Lastly, if the rate of progression is moderate, extravagance and transfer of capital need not occur on any alarming scale.

§11. The faculty or ability theory of taxation.—As previously stated, the word 'ability' as used by Adam Smith is objectively interpreted to mean the capacity of the taxpayer to contribute as judged by the monetary value of his wealth. The faculty or ability theory is much older than the sacrifice theory. At first, faculty was measured by property. Later, it came to mean income. Formerly, the simple rule of arithmetical proportion was applied but today the rule of progression is generally followed on the ground that the ability to pay the tax increases progressively. The faculty grows in more than arithmetical proportion to increase of income. Progression and exemption of a minimum income can be justified on the theory of faculty also. A certain minimum income requires exemption since the taxation of such income would diminish the general efficiency of labour. Similarly, as regards allowances and abatements,

it is obvious that a bachelor with Rs. 500 a year possesses a higher faculty to pay than a married person with a family earning the same income.

§12. **The benefit theory of taxation** is suggested by Adam Smith's reference to the revenues enjoyed under the protection of the State. As previously stated, this theory is of special relevance in the case of the services rendered by municipalities and other institutions of local self-government. But otherwise it offers rather too narrow a basis for taxation. The essence of taxation is the absence of a direct *quid pro quo*. If the assumption that taxes should be considered as payments for services rendered by the State were unflinchingly applied, it would result in *regressive taxation*, i.e. taxation which presses on the poor more heavily than on the rich; since the weak and the poor, who are unable to look after themselves, may be supposed to derive a larger benefit from the State than the rich and the powerful.

§13. **The social function of taxation theory.**—Apart from revenue considerations, taxation can and is used for a variety of other purposes, e.g. to encourage indigenous industry through protective duties, to improve public taste and public morals, to benefit national health by heavy duties on noxious drugs like opium and on alcoholic liquors, and to bring about a better distribution of wealth, etc. But we must not forget that the main function of taxation is to raise an adequate revenue for the maintenance of the State, and this must be done with the minimum of cost—not only the cost in collection but also cost in the shape of public patience. The principle is that the goose (taxpayer) must be plucked, but without making it squeal too much. This sounds cynical. But it must be admitted that in actual practice the principle of expediency is often found to overbear all other considerations.

§14. **Other canons of taxation.**—The other canons of taxation are largely of the nature of administrative rules and do not raise any questions of principle. They may now be briefly considered.

(II) *Certainty.*—As Adam Smith points out, the time of payment, the manner of payment and the amount of the tax to be paid ought to be clear and intelligible to all concerned. The land revenue in India when it was farmed to middlemen in the eighteenth century is a good illustration of the evils—such as arbitrary exactions, corruption of State officials and uncertainty of yield—which follow from disregarding this canon.

(III) *Convenience.*—Every tax should be levied at the time and in the manner most convenient to the taxpayer. Thus,

in India land revenue is collected in instalments which fall due after the harvest is taken. Indirect taxes on the whole conform better to this canon than direct taxes.¹

(IV) *Economy*.—The cost of collection of a tax should be kept as low as possible in order that the net yield of a tax secured by the State should be as large as possible without at the same time imposing any serious handicap on trade and production. Thus, internal transit dues are to be condemned on this account. So also it is hardly worth while for the State to assess a large number of petty incomes, since it would make it necessary to maintain a large army of tax-collectors. (Incidentally this gives us another reason for exempting low incomes from taxation.)

(V) *Productivity*.—It is very desirable from the standpoint of both the State and its subjects that a given amount of revenue should be raised from a small number of highly productive taxes rather than from a large number of taxes each yielding an insignificant amount. Also, the tax system should be such as not to trench seriously upon the productive resources of the community.

(VI) *Elasticity*.—A good system of taxation should as far as possible provide for a self-acting increase in the revenue so as to keep pace with the growth of population and wealth in a community. The income-tax satisfies this test admirably. Any increase in the wealth of the community automatically increases the yield from income-tax. Again, in any emergency, like war, we have simply to raise the rate of the tax and we realize a larger revenue without any addition to the administrative machinery. The Indian Land Revenue in general and the Permanent Settlements in particular afford a contrast to income-tax from the point of view of elasticity.

(VII) *Simplicity*.—The tax system should be readily intelligible to the man of average intelligence and should not leave him in any doubt regarding his obligations under it.

The various canons discussed above give general guidance to the practical statesman. It is necessary to remember, however, that any individual tax may offend against this or that principle or canon and yet it may be a good tax. It must be judged not by itself but as forming part of a system. It is impossible so to arrange matters that every single tax should conform to every one of the canons. To mention only one of the difficulties, the canons themselves are not all consistent with one another. What is to be aimed at, however, is that the taxation system as a whole should secure broad justice. The

¹ See §18.

peculiar deficiencies of one tax must be corrected by the special excellences of another.

§15. Taxable capacity.—While discussing the faculty theory above, reference has been made to taxable capacity. We shall now examine further the conception of taxable capacity. It has been defined by Sir Josiah Stamp¹ as the fund which 'is measured by the difference between two quantities—the total quantity of production and the total quantity of consumption', after making suitable allowances for annual replacements, repairs and renewals. In the case of India, the standard of consumption is very low, but production is also very low, so that the difference between the two gives us a very small margin of taxable capacity. Any estimate of taxable capacity must at best be a rough guess. This is particularly so in a country like India owing to the paucity and unreliability of statistical data.

§16. Limits of taxable capacity.—Taxable capacity, as defined above, is not an absolute figure. (i) It depends upon how revenue from taxation is used. As Sir Basil Blackett once remarked, 'it is a question of expenditure very much more than that of taxation'. If money raised by taxation is spent on nation-building departments, like education, health, industries and agriculture, the taxable capacity of the people can be greatly increased. If, on the other hand, a large proportion of revenue is spent on the army and other unproductive purposes the taxable capacity will remain low. Military expenditure in India is generally regarded as open to serious criticism from this point of view.

(ii) Taxable capacity also depends upon the spirit and the national psychology of the people.² Under the influence of patriotic fervour or some other short-lived but powerful feeling the willingness of people to suffer sacrifices may for a time greatly increase. Even in ordinary times some people (e.g. the English) bear taxation more willingly than others (e.g. the French). In India it is probably true that people on the whole do not show sufficient willingness to submit to taxation for socially useful purposes owing to a still undeveloped sense of civic duty.

(iii) Thirdly, taxable capacity depends on the way in which the taxation is raised, both as to the methods adopted and the rate at which the increase is laid on. Thus the hardship felt by the taxpayer under a single tax would be much greater than under a variety of direct and indirect taxes each

¹ Sir Josiah Stamp, *Wealth and Taxable Capacity*, p. 114. ² *Ibid.*, p. 118.

falling on a different group of people in the community. Some variety in taxation is therefore necessary so as to spread its burden evenly on different classes of people.

(iv) Fourthly, taxable capacity depends upon the number of inhabitants among whom a given aggregate of national wealth is divided. If that is very large relatively to the total wealth, as in the case of India, taxable capacity will be low.

(v) Evenness or unevenness of distribution is another factor to be considered. If, for example, there are 100 persons with an income of Rs. 2,000 and one person with Rs. 2,00,000, there would be a larger taxable capacity than if the same aggregate of Rs. 4 lakhs were equally divided among 101 persons. In the first case, while 100 persons would make a minimum contribution to the income-tax, say 9 pies in the rupee, the man with Rs. 2,00,000 would contribute at the rate of, say, 30 pies in the rupee. In the second case, the contribution received from 101 persons, all with equal incomes of small range, would be much smaller than in the first case. This result follows from progressive taxation. In India, taxable capacity is low, not only because production is low and is divided among a large number of people, but also because quite a large number of incomes are more or less of the same low level.¹

§17. Direct and indirect taxes distinguished.—We may next examine the usual distinction between direct and indirect taxes. 'A direct tax is really paid by the person on whom it is legally imposed, while an indirect tax is imposed on one person, but paid partly or wholly by another owing to a consequential change in the terms of some bargain between them. Thus an indirect tax is conceived as one which can be shifted or passed on, a direct tax as one that cannot.'² Perhaps the best example of a direct tax is the income-tax, while that of an indirect tax is customs duties, or an excise like the salt tax in India. The latter is collected by the Government from a few licensed manufacturers or dealers but is paid ultimately by all consumers of salt in the enhanced price at which salt is sold in the Indian bazaars. On the other hand, the burden of the income-tax falls on the person assessed to it just as the burden of the land tax, which is also a direct tax, falls on the land-holder.

¹ According to Sir William Layton, however, though India consists in the main of extremely poor people, it is at the same time a country where there are large accumulations of wealth, on which Government taxes rest very lightly. The extent of these accumulations is a matter of conjecture. Anyhow, Sir William Layton seems to accept our contention in the text by admitting that *in the main* India consists of extremely poor people.

² Dalton, *op. cit.*, p. 88.

§18. Merits and demerits of direct and indirect taxes.—The main advantage of a direct tax is that it brings home to the taxpayer the responsibilities of citizenship and makes him critical of Government extravagance and suspicious of hasty and expensive social and political experiments. On the other hand, indirect taxes encourage prodigal expenditure on the part of the Governments who can raise funds with comparative ease by levying such taxes, because the people who really pay them are scarcely aware of the fact.

Direct taxes are in principle sounder and more equitable than indirect taxes since they can be better graded to suit the ability of the taxpayer. A direct tax like income-tax, for example, lends itself more readily to progression, and the richer sections of society can thus be made to contribute a fair share towards the expenses of the State. Indirect taxes are generally regressive in their nature, pressing more heavily on the poor than on the rich. For instance, the poor man and the rich man both consume practically the same amount of salt, and therefore pay the same amount of tax, which is unfair. To equalize the burden, the poor man should be required to pay less because his income is smaller.

Direct taxes enjoy the advantage of certainty both for the taxpayer and the State. The yield of indirect taxes is often uncertain, as also the extent of the rise in the price of the taxed commodity or service.

Direct taxes are, however, unpopular since the taxpayer cannot help being aware of them. For the same reason, there is a stronger tendency to evade them than in the case of indirect taxes, and there is greater possibility of fraud. On the other hand, an indirect tax is less felt by the taxpayer. He pays little by little every time he buys the taxed commodity. The price he pays is no doubt higher on account of the tax, but if he complains of the price at all he is inclined to blame the producer of the commodity rather than the taxing authority. He is taxed in the dark, so to speak, and fails clearly to see that he is taxed, especially as the tax is not paid in one lump sum but is spread over a series of purchases.

Direct taxes are sometimes more difficult to administer and more expensive to collect than indirect taxes. For example, an extensive assessing and collecting machinery is necessary in the case of direct taxes like the land tax in India or income-tax in order to deal directly with a large body of individual assesseses. The cost of collecting indirect taxes, on the other hand, is moderate being collected from a comparatively small number of producers or dealers. It is, however, necessary to

exercise care in selecting the commodity to be taxed. Preferably it should be one that is widely consumed. Another merit of indirect taxes is that through some of them alone (e.g. through the salt tax in India, or the taxes on sugar and tea in England) can the masses be reached and thus everybody made to contribute his quota towards the expenses of the State. One great point against indirect taxes, however, is that they are particularly liable to disturb the smooth course of trade and industry. This is especially true in the case of internal transit duties, which have therefore been abolished in most countries.

Direct taxes being in principle superior to indirect taxes, their predominance, as under the British taxation system, indicates a more advanced economic, political and social development. Indirect taxes play a more important part than direct taxes in India, which is therefore less advanced from this point of view. But even in the most advanced countries, indirect taxes have to be resorted to, and account for a considerable portion of the total revenue.

§19. Importance of a study of the incidence of taxation.—An important problem of public finance is the incidence of taxation. A distinction may be drawn between *impact* and *incidence*. The impact of the tax is upon the person who first pays the tax; the incidence is upon the person who ultimately bears it. Thus, (i) if as a result of an excise duty on matches levied on the manufacturer, their price rises by the full amount of the duty, the incidence of the tax falls wholly on the buyer; (ii) if the price rises, but not by the full amount of the duty, the incidence is partly on the manufacturer and partly on the buyer; and (iii) if the price does not rise at all the incidence is wholly on the manufacturer. The transference of the burden, from the person who first pays the tax to some other person or persons, is known as *shifting*.

The question of incidence of taxation is of great practical significance, and unless careful attention is paid to it, mistakes may easily occur. We may intend the burden of taxation to fall on one set of people, but actually it may come to be borne by quite another set. We have also to consider any incidental advantages and disadvantages following from any proposed tax.

In the case of *direct taxes*, the impact and incidence of the tax are intended to fall on the same person or persons. But this does not invariably happen. For instance, an income-tax levied in the first instance on business men may be shifted by them to their customers in the shape of enhanced prices for the goods or services sold, or to their workmen in the form of

lower wages. It may have other secondary effects in checking enterprise and saving. Succession duties are another form of direct taxation, and it has been argued against them that unless they are very moderate they act as checks to accumulation, promote extravagant expenditure and may be evaded through gifts *inter vivos*. All this may have adverse reactions on enterprise and wages of labour.

As regards *indirect taxes*, the original intention of the State, that the tax should be shifted in a certain manner, may not be realized at all or only partially realized, and here also there may be various secondary reactions and after-effects.

§20. **Theory of incidence of taxation.**—The general principle of incidence is that the shifting of a tax can ordinarily take place as between one person and another by a change in the bargain between them; free competition and free play of the economic forces of supply and demand being assumed. With regard to taxes on particular commodities or services, two propositions may be laid down. (i) 'The first is that, other things being equal, the more elastic the demand for the object of taxation, the more will the incidence of the tax be upon the seller. (ii) And the second is that, other things being equal, the more elastic the supply of the object of taxation, the more will the incidence of the tax be upon the buyer.'¹ Thus the greater part of a tax on luxuries (the demand for which is elastic) will be borne by the seller, for if he tried to shift the whole of it by raising the price to the full extent of the tax, the demand would fall appreciably. The seller may therefore not raise the price to the full extent of the tax, preferring to keep up his sales. On the other hand, in the case of a tax on a necessary of life, like salt, with inelastic demand, the greater portion or the whole of the tax, and sometimes even more than the tax, will be borne by the consumer, since the buyer cannot much curtail his purchases even if the price is appreciably higher than before. On the other hand, the supply being elastic, the seller can restrict it and will thus be able to charge a higher price.

In considering the incidence of a tax on commodities, allowance must be made for the influence of the laws of cost (returns). Thus, if a commodity is produced at increasing cost per unit, a tax on it may not raise its price by the full amount of the tax since the marginal cost of producing a smaller quantity now demanded because of the higher price, will be lower than before. If a commodity is produced at a diminishing cost, a tax on it will raise the price by more than the amount of

¹ Dalton, *op. cit.*, p. 54.

the tax, for the marginal cost of producing a reduced quantity is higher than before. Therefore, the new price will be higher than the old price *plus* the tax. In the case of constant cost, there will be no change in the cost of production in consequence of change in demand and supply, and the price will rise by exactly the amount of the tax.

(iii) A third factor that must be borne in mind in dealing with the incidence of taxation is the question how far substitutes for a commodity or correlated articles are also taxed. If they are not taxed, the greater portion of the tax will have to be paid by the seller, since the consumer can turn to the non-taxed substitutes.

§21. **The incidence of tax on rent.**—A tax on pure economic rent or unearned increment must ultimately be paid by the landlord. We have already seen¹ that rent does not affect price which is determined by marginal cost of production of the no-rent land and therefore the burden of a tax on rent cannot be shifted to the consumers. Nor can the tenant be made to pay it, since under competition he cannot retain any portion of the rent. This argument is based on the assumption that the tenant is already paying the full economic rent. However, if competition amongst tenants is imperfect, the tenant may be unable to shift a tax levied on him to the landlord, and may have to bear it wholly or in part. Or if the landlord is required in the first instance to pay the tax, he may be able to recoup himself by raising the existing rent until he is able to absorb the whole of the economic rent. In this case again the tax will be partly shifted to the occupier.

§22. **Incidence of taxes on buildings.**—This is by no means easy to determine. Ordinarily in the case of growing towns, the incidence of a tax on buildings falls on the occupier rather than the landlord, since demand for buildings is inelastic. Moreover, the landlord expects a net return on his investment at the current market rate and looks upon a tax on buildings as part of his expenses. At the same time, it is true that the supply of houses is not as elastic as that of less durable articles. Periods of business depression may synchronize with brisk building activity, and the landlords will have to bear the greater part of the tax. Sometimes such a tax may be shifted to the purchasers of the products sold by the occupier.

§23. **Taxes on monopolies.**—The incidence of a tax on a monopolist depends upon the nature of the tax imposed. If a *fixed tax* is levied upon the monopolist, its full incidence will fall upon him, since he may be supposed to have already fixed his

¹ See ch. xiii, §14.

price so as to yield him a maximum monopoly revenue. The same will be the case with a tax *proportional* to the monopoly gain. If the monopolist tried to raise the price, the equilibrium would be disturbed and his gain lessened. He would therefore prefer to bear the tax himself rather than change the price which according to his calculation is yielding him the highest income possible. If, however, the tax is *proportional to the output*, the monopolist will try to reduce output and raise the price if he finds that he can thus escape a greater loss in monopoly revenue caused by the payment of a tax on a larger supply.

PUBLIC EXPENDITURE

§24. **Classification of public expenditure.**—A study of the actual expenditure of modern States gives us the following list:¹

(i) The maintenance and equipment of armed forces, including police, (a) in peace, and (b) in war.

(ii) The administration of justice.

(iii) The maintenance of the ceremonial head of the State.

(iv) The maintenance of the machinery of civil Government.

(v) Public debt charges.

(vi) Expenditure directly devoted to 'fostering industry and commerce' (e.g. consular service) and the performance of industrial and commercial functions, such as the supply of currency, conduct of postal service, transport services, etc.

(vii) Social expenditure on health, education, old age pensions, poor relief, provision for unemployment, etc.

There are various other points of view from which public expenditure may be classified.

(i) *According to the authority which incurs the expenditure.*—For example in India we have (a) *National or Central* expenditure on defence, currency and other matters affecting the general welfare; (b) *Provincial expenditure* on education, roads, justice, police and public works; (c) *Local expenditure* incurred by local self-governing bodies, like Municipalities and District Boards, on services which affect the local welfare, such as local sanitation, street lighting, local education, water supply, local communications.

It is obvious that there is a certain overlapping between these various authorities. Education and communications are instances in point, all the three types of spending authorities being interested in them one way or another.

(ii) *According to the nature of the benefits conferred,*

¹ See Dalton, *op. cit.*, pp. 194-5.

(a) special benefits on particular members of the community, such as bounties, pensions; or (b) general benefits on all members, such as general administration, civil works, defence, education.

§25. Productive and unproductive expenditure.—A distinction is usually drawn between productive and unproductive expenditure. Expenditure on commercial undertakings, like railways, irrigation and harbour projects, is obviously productive. So is expenditure on education, parks, museums and libraries, public health and sanitation, although not so directly as in the former case.

The best example of unproductive expenditure is the large amount of revenue spent on armaments and war, although it is not easy to maintain that such expenditure is in every case superfluous or unnecessary. It is, however, desirable to keep it as low as possible. Expenditure on police and internal security and the administration of justice falls into the same class, but is inevitable and necessary for preserving that security which is the first condition of economic progress.

It is hardly necessary to point out that simply because a certain item of expenditure is productive, it does not follow that the State would be justified in incurring it. It is only when State expenditure is likely to promote the general welfare more effectively than private expenditure that State intervention is desirable. We must also carefully consider whether any benefit conferred by Government expenditure is not outweighed by possible adverse effects on saving and growth of capital due to the taxes levied to secure the necessary funds.

§26. Public expenditure in relation to distribution of wealth.

—Expenditure incurred by the State has important effects on the distribution of wealth. Old age pensions, minimum wages laid down by law, expenditure on the education of the masses, public amenities such as parks and museums financed by the progressive taxation of the rich, etc., tend to have a far-reaching influence upon the distribution of income and supply a corrective to the glaring inequalities of wealth under the present economic organization. Here again the effects of such expenditure on the industry of the classes who receive the benefit and on the savings of the classes taxed must be weighed carefully.

§27. Theory of public expenditure and of governmental functions.—We may conclude the discussion of public expenditure by a brief exposition of the theory of public expenditure, which is closely bound up with the theory of governmental functions. The older English writers (Adam Smith and the classical school

of political economy in England) failed to develop a theory of expenditure, as their *laissez-faire* ideas set very narrow limits to the functions undertaken by Government. The sole duty of the State, they thought, was to protect the life, liberty and property of individuals from violence or fraud. All expenditure by the State beyond that necessary for the preservation of the community against internal disorder and external aggression was held to be sheer waste and an undue burden on the community. The individual, it was assumed, understood his own interest best, and the best way of achieving the greatest good of the greatest number was to leave every individual absolutely unhampered to pursue his own interest as he understood it. The function of the Government was limited to providing the necessary conditions for the exercise of individual liberty. For about a century (from the middle of the eighteenth to the middle of the nineteenth century) this theory of Governmental functions was dominant. But the grave social evils which were seen to follow under a *laissez-faire* regime lent great point to the vigorous criticism to which it was subjected from a socialistic angle, and the net result has been a great extension of State activity. We may be said to be face to face today with Wagner's 'Law of increasing State activities' according to which there is a persistent tendency both towards an extensive and an intensive increase in the functions of the State.¹ One reason for increasing State activity is that the State has greatly improved in modern times in its efficiency, and its superiority for many purposes over private agencies is being more readily admitted. Again, certain modern developments, especially the striking growth of towns, has made it necessary for the State to assume new functions, e.g. with regard to public health and hygiene, which could not well be left to private enterprise.

Under socialistic influences, public expenditure is being freely incurred to supply various amenities of life to the masses, such as parks, museums, art galleries, libraries, free primary education, free medical inspection of children, etc. The last war was a powerful influence making for a great extension of the sphere of State activity and expenditure, and the tendency has been further strengthened by the present war. The economic depression after the year 1929 and the apparent helplessness of private enterprise in bringing about revival has called forth economic plans on a comprehensive scale initiated and enforced by the State. We may leave out as exceptional the case of Russia with its famous five-year plans. But even

¹ See Dalton, op. cit., p. 191.

in the old capitalistic countries, based on individualism and private property, the State has found itself compelled to undertake new functions and expenditure—witness the American experiment of the New Deal launched by President Roosevelt. The growth of the spirit of economic nationalism and the universal quest for economic self-sufficiency are also tending to increase State activity. Much of this restless activity may be on the whole necessary and beneficial. But on the debit side we must count the inconveniences and dangers attendant on it. Firstly, there is danger of a vast State bureaucracy being called into existence and a large army of State employees pressing their claims for specially favourable treatment. It is also a question how far the economic arts can be maintained with the progressive narrowing down of private enterprise. Another grave aspect of the matter is the rapidly growing increase of State expenditure with its accompaniment of heavy taxation, which may have an adverse reaction on trade and industry and on the growth of capital. Further, we must consider the harmful tendency towards public extravagance which in some cases may have a positively demoralizing effect. For instance, the system of unemployment relief, unless carefully watched and controlled, may seriously weaken the moral fibre of society. It is very desirable that public expenditure should not exceed the taxable capacity of the people. It should also be remembered that the need for economy and avoidance of waste are at least as great in public as in private expenditure.

§28. **Economic functions of the State.**—From the foregoing survey, it will have been clear that the economic functions of Government are becoming wider and wider. Even the non-economic functions, such as defence and justice, have generally an important economic bearing. We shall, however, now consider the functions that are *directly* economic.

(1) In the first place, *the State may itself own and manage economic enterprises*. These enterprises are of growing importance in the sphere of central as well as local Government. When local authorities undertake such enterprises, it is referred to as Municipal Socialism or Municipal Trading. The manufacture of armaments and munitions, which are vital for national defence, must be directly under State management. Certain monopolies—like the Post Office, currency, the supply of water, gas, street traction—are passing more and more into the hands of the State, the justification being that if they are owned and managed by private people, serious abuses are likely to creep in, and State regulation may be difficult, if not impossible. Or again, the State may justifiably own and man-

age necessary enterprises to which private capital is not likely to be attracted or in which the return to capital may be distant and uncertain. Examples of this are railways and irrigation works in certain areas, afforestation, road-making, etc. Lastly, the State may be called upon to undertake as pioneer certain industries in order to prepare the way for subsequent private enterprises.

(ii) In the second place, *the State may seek to regulate certain economic activities* under private enterprise. We have already referred to the need for controlling such social monopolies as are left in private hands. Anti-adulteration laws offer another example of State regulation, as also factory legislation and the regulation of wages, Workmen's Compensation Acts, marine regulations, and the regulation of weights and measures.¹

(iii) In the third place, the State may encourage certain economic activities and industries through protective duties and bounties and subsidies, Government purchases of private stores, Imperial Preference, Trade Agreements, etc.

§29. Social activities of the State.—These occupy an intermediate position between non-economic functions such as defence and justice on the one hand, and the economic functions of the State on the other. General and technical education, provision of parks, libraries, village uplift, public health, housing schemes for the benefit of the working classes, poor relief, unemployment allowances and social insurance—all these activities improve the economic efficiency of the people in the long run and therefore the outlay of State funds on them is more than merely humanitarian in character.

PUBLIC DEBT

§30. The nature of public debt.—The payment of interest and the repayment of the principal thereafter form part of public expenditure until the debt is cancelled. In case the loan is used productively it may create assets which may become available in time to meet these charges. Or at least they will be there sooner or later to reimburse the national exchequer for the expenditure incurred. There will of course be nothing to show against loans for unproductive purposes like war, and the

¹ 'Perhaps the State is most useful as a means of providing standards; this is positive work of great value. . . The State provides standards of weights and measures, of purity, e.g. milk, and of money.'—Briggs and Jordan, *op. cit.*, pp. 355-6. Here the object of State intervention is to prevent abuses of private enterprise and to ensure fair play to, and the safety of, the consumer or the worker.

additional taxes that will be necessary for repaying them represent a dead loss to the nation.

Historically, public credit may be regarded as the development of private credit; in England, where the King was both in theory and in practice the financier of the nation, the security for State loans was originally his personal credit. The repudiation of debt by Charles II compelled Parliament to intervene and assume control over the national debt. The Bank of England (1694) had its origin in a public debt transaction. The growth of Parliamentary control together with the economic advance in England led to a striking development of the National Debt.

Public credit differs in two ways from private credit. (i) On account of its sovereign power the State may command where private persons may only persuade, as in the case of forced loans in the past. Nowadays, however, the State seldom uses its sovereign power in this manner. The rise of constitutional government and the offer of the general revenues of the State as security have greatly improved the credit of the State, which is now generally able to borrow without using any kind of force and on appreciably cheaper terms than individuals or corporations (except in countries suffering from chronic anarchy and misrule, as some of the South American States).

(ii) Secondly, public credit is relatively more lasting than private credit since the State is a corporation that never dies, and therefore the State can borrow more easily than individuals can for distant objects and long periods.¹

§31. **Uses of public loans.**—We may now indicate some general principles which should regulate public borrowings.

(i) In the first place, *temporary loans may be floated to meet an unforeseen or casual deficit*.—It would be unwise to disturb the taxation system for such purely temporary purposes. Short-period loans (e.g. in the shape of Treasury Bills) are also justifiable during periods of slack revenue collections, as in the sowing seasons in India. It is, however, a most unsound financial practice to meet continual deficits by short-term loans (as in the case of the Government of India's deficits during 1918-23). Such accumulating temporary debts must eventually be 'funded', i.e. arrangements must be made for the payment of the interest charges and the capital sum.

(ii) Secondly, *public borrowing is necessary to meet an emergency like war*.—Historically, war has been the principal cause of national debts, and the present war is responsible for a stupendous increase in them in all the belligerent countries.

¹ Nicholson, op. cit., vol. III, p. 405.

§32. How should war be financed?—There has been some controversy as to how far wars should be financed by loans and how far by taxes.

(i) The greatest argument for war loans is that it is quite impossible to depend on taxation alone for raising the enormous sums necessary to conduct a modern war. (ii) Further, when a war is actually in progress it is necessary to keep up the morale of the people. If taxation is oppressively heavy this object will not be fulfilled. (iii) Lastly, it is not just to throw the whole burden of the war on the present generation by raising the necessary money by taxation alone. A war may be supposed to be fought in the national interests, affecting future generations also, and therefore they should be made to shoulder some part of the burden by being called upon to pay the interest charges and repay the principal of long-term loans.

As against these arguments, it is contended that : (i) War expenditure should be financed mainly by taxation, since under the influence of patriotism people are willing to bear heavier burdens than in peace time, and it is wholly legitimate to take full advantage of this spirit of self-sacrifice. Also, such a policy would exercise a much-needed check on private extravagance during a time of national peril. (ii) Secondly, war loans under the present monetary and banking system tend to bring inflation of currency and credit, and therefore a sharp rise in prices and all the disturbing consequences that follow in the wake of a depreciated currency.¹ The subsequent reaction and fall in prices are equally disturbing and inconvenient to the community at large. It is therefore much better to raise the necessary money by taxation, which has the further advantage that it saves the nation from the millstone of high interest charges and heavy post-war taxation to meet such charges. The burden of these charges is felt to be particularly hard to bear because the loans are for purely destructive purposes and create no assets. (iii) Thirdly, as regards the contention that future generations should be made to pay at least part of the burden, in the first place, it may be questioned how far it is just to saddle posterity with the mistakes of the present generation. Even assuming that it is just to do so, there is the economic aspect of the matter which cannot be ignored. Since a war means so much sacrifice of existing wealth, material and non-material, the main burden of it must fall on the present generation. It cannot be shifted to posterity. In so far as the war is financed by internal loans the only result would be a change in the distribution of the wealth of future

¹ See ch. x, §§22 and 34.

generations as compared to that of the present generation, the war-bond holders of future generations being favoured at the cost of the other citizens. It is only by raising external loans that the burden of war can be to some extent placed on future generations. It is of course necessary not to push taxation to such limits as to make people lose heart when a war is on. They must not, on the other hand, be encouraged to pursue an unduly aggressive or extravagant policy, and there is nothing like taxation to foster sobriety in these matters.

Weighing the pros and cons we come to the conclusion that we have to resort to taxation as well as to loans. The tendency to resort too readily to loans must be resisted. It is desirable to push taxation as far as it will go for financing war expenditure.

§33. Loans for productive and unproductive objects.—A very important use of public borrowing arises in connexion with public works, which may be divided into two classes: (i) Productive works like the Indian (commercial) railways and irrigation canals; and (ii) Unproductive works, such as public buildings or technically unproductive objects like education. Loans for financing productive works hardly need justification. They are self-liquidating or reproductive, i.e. they create sufficient assets in the long run to pay both interest charges and the principal. Moreover, they add to the productive resources of the community and promote its economic development. The duration of these loans should be regulated by the period during which the benefit of such works is expected to last, and their repayment should be spread over this period, being effected in suitable instalments. The same purpose could be served by providing for a sinking fund calculated to provide at the end of a certain period an amount sufficient to repay the loan.

As regards unproductive loans for financing public buildings, parks or museums, education, etc., the older economists were inclined to disapprove of them on the ground that such outlay did not directly pay its way. Modern economists take a less conservative view and are prepared to allow the use of loan funds on the broad grounds that such expenditure is calculated to promote the economic faculties of the nation and that the return is more than sufficient in the end to cover the initial outlay.

§34. Internal versus external loans.—In the end it may be added that internal loans should be preferred to loans raised abroad. The former involve a mere redistribution of wealth in the country itself. The latter may lead to political and other complications. At the same time, when capital is not avail-

able within a country there is no harm in raising it abroad subject to proper safeguards

SUMMARY

The treatment of Public Finance falls into four divisions (i) Public revenue, (ii) Public expenditure (including the economic functions of the State), (iii) Public debt, and (iv) Financial administration. The last being an administrative question is omitted here.

There are three main systems of Public Finance (i) The system of predetermined income, expenditure being adjusted to income, (ii) The system of predetermined expenditure income being adjusted to expenditure, (iii) The commercial system, under which neither income nor expenditure is fixed beforehand.

PUBLIC REVENUE

The sources of public revenue can be divided into the following classes (i) Direct revenue or non-taxation revenue, (ii) Derived revenue, i.e. revenue derived from the income of citizens by means of taxes, fees, etc.; (iii) Anticipated revenue (public debt), (iv) Miscellaneous, i.e. tribute, fines, gifts, currency profits, etc.

Taxation

A tax is a *compulsory* contribution of the wealth of a person or body of persons for the service of public powers. The contribution is (i) *compulsory* (ii) may be in the form of money or goods or services, and (iii) used for purposes of general utility, no attempt being made to return to every individual taxpayer benefit exactly equivalent to what he pays as tax.

Unlike a tax, a *fee* is a *voluntary* payment for a *specific* benefit received by the individual paying the fee.

The *canons of taxation* are (i) equality, (ii) certainty, (iii) convenience, (iv) economy, (v) productivity, (vi) elasticity, and (vii) simplicity.

The canon of equality is of great theoretical importance and is the parent of a number of distinct theories, such as (a) the equality of sacrifice theory, (b) the faculty or ability theory, (c) the benefit theory, and (d) the social function of taxation theory.

According to the *equality of sacrifice theory*, the sacrifice asked for by the State from different individuals should in fairness be equal. As applied to income-tax, this theory offers justification for the widely prevalent practice of (i) exempting a certain minimum income from taxation altogether, and (ii) adopting the principle of progression. The same practice can also be justified with reference to the *theory of faculty or ability*, which sets out not to equalize sacrifice but to exact from different taxpayers what each can *afford*. The equality of sacrifice theory is subjective because it concerns itself with the feelings of the taxpayer. The faculty theory is objective because it concerns itself with an objective fact, namely, the ability of the taxpayer to pay more or less.

As regards *progressive taxation*, those who advocate it rely more on the equality of sacrifice theory than on the faculty theory, and from this point of view the objections raised against it are that it is impossible to measure the degree of sacrifice in each case.

Other objections are that since we do not discriminate between the rich and the poor in other things (e.g. in the market the rich and the poor alike pay a certain fixed price for any given article) there is no reason why we should discriminate in taxation. If it is said that by taxation we want to redress the inequalities of distribution the retort is that the proper object of taxation is revenue and not social justice.

In spite of these objections the case for progression is strong. In giving practical effect to it, however, the usual precautions (which apply to all taxation whatever) should be borne in mind. Taxation should never be so heavy as to injure the motive for saving and strengthen beyond control the desire to evade.

The *benefit theory* does not offer a sufficiently broad basis for taxation, and if pushed to its logical conclusion may lead to various absurdities.

The *social function theory* calls attention to the fact that although the main object of taxation is and ought to be revenue, it may to some small extent also be used for various desirable social purposes.

Other practical rules of taxation are that the taxpayer should not be left in any doubt as regards what and when he has to pay, and his convenience should be consulted as far as possible. Again, the cost of collection should bear a reasonable relation to the amount collected, and taxes should be productive rather than numerous.

These various rules and canons are for general guidance. It is impracticable to ensure obedience to all of them in the case of every single tax. The taxation system as a whole, however, should be regulated in the light of these various principles.

Taxable capacity.—Taxable capacity is wealth produced *minus* wealth consumed *plus* wealth used for replacements, repairs and renewals. Taxable capacity increases or decreases according to whether the public revenue is well or ill used. Taxable capacity further depends (i) on the size of the *per capita* income; (ii) on whether the distribution of wealth is even or uneven (uneven distribution—however objectionable in other ways—increases taxable capacity).

Direct and indirect taxes.—Direct taxes fall and are intended to fall on the persons from whom they are collected. Indirect taxes are in the first instance collected from one set of persons, but they are shifted, and are intended to be shifted, to another set of persons.

Direct taxes have the advantage of creating a sense of responsibility among those who pay them. They also check Governmental extravagance and are easier to grade so as to distribute the burden of taxation equitably.

Indirect taxes are less difficult to administer and less expensive than direct taxes. Again, if it is a sound political principle that every citizen should be made to contribute something towards the expenses of the State, this principle can conveniently be enforced only if we rely upon certain indirect taxes.

On the whole, however, direct taxes are to be preferred, and their predominance may be taken as an index of advanced economic, political and social development. The great point in favour of indirect taxes is that they enable governments to raise a considerable revenue without exciting discontent. This is, however, not an unmixed blessing.

The *impact* of a tax is on the person who first pays it; the *incidence* is on the person who ultimately bears it.

In the case of direct taxes, impact and incidence are intended to be on the same person or persons (though the intention may not altogether be fulfilled). In indirect taxes, the intention is that the original payer should shift the burden to someone else (though here again facts may not precisely correspond to intention).

As between buyer and seller, if demand is elastic, the burden of a tax tends to fall on the seller; if supply is elastic, it tends to fall on the buyer.

The manner in which the price of a taxed commodity is affected will depend upon the relation between volume of production and cost of the commodity.

If along with a commodity, substitutes for it are also not taxed, the tax will be paid mostly by the seller.

A tax on 'economic rent' cannot be shifted by the landlord on to either the tenant or the consumer.

The incidence of taxes on buildings depends upon the relative intensity of supply of and demand for buildings, about which generalization is not possible.

A fixed tax on monopoly profits will be paid by the monopolist. A tax proportional to output may fall partly on the consumer.

PUBLIC EXPENDITURE

Public expenditure falls under the following main heads: (i) Internal and external security; (ii) Maintenance of the machinery of Government; (iii) Service of debt; (iv) Industrial and commercial functions; and (v) Social expenditure.

It can also be classified (i) according to the authority incurring it, as national, provincial or local; (ii) according to whether its benefits are general or reach particular groups of people; and (iii) according to whether it is productive or unproductive.

Public expenditure may have far-reaching effects on the production and distribution of wealth.

The field of public activity and public expenditure has been greatly enlarged in recent times owing to (i) the general abandonment of the *laissez-faire* policy; (ii) the greater efficacy of State activity as compared to private activity in certain important matters; (iii) the influence of socialistic thought; (iv) the challenge of the world-wide economic depression from 1929-37; and (v) the growth of economic nationalism.

Although much of this State activity may be necessary, the individualist's objections have not altogether lost their point. The dangers to be guarded against are (i) Red-tapism and a grasping and selfish bureaucracy; (ii) Deterioration in the arts of production due to the weakening of individual initiative, and the restriction of the scope for private enterprise; (iii) Public extravagance and expenditure pandering to the populace and demoralizing it.

The economic functions of the modern State can be enumerated as follows: (i) Enterprises may be owned and managed by the State directly, e.g. some of the railways in India; (ii) The State may regulate private enterprise in the interests of the public; and (iii) The State may encourage certain private economic activities.

In addition to these functions, the State usually undertakes a number of other functions not in themselves economic but tending to improve the economic efficiency of the people through education, sanitation, etc.

PUBLIC DEBT

All modern States have a large public debt, partly productive and partly unproductive.

As a logical corollary of the theory of State sovereignty, the State can raise forced loans, which private individuals cannot (modern States, however, seldom exercise this power).

Public debts can further be of much longer duration and can generally be raised at more favourable rates than private loans.

Temporary loans are justifiable for meeting temporary deficits. But it is not a sound practice to have constant recourse to short-term loans for meeting budget deficits.

Modern wars are so expensive that it is impossible to finance them wholly by taxation. Any attempt to do so is likely to be futile and to lead to discontent and depression of spirits and seriously to prejudice the prospects of victory. On the other hand, as much money as it is possible to raise without bringing about these evils should be raised by taxation since it is good that people should realize that war involves sacrifice. Full advantage should also be taken of the patriotic willingness of people during war-time to undergo sacrifice. It is further necessary to minimize the evil economic consequences of excessive public loans.

Both productive and unproductive loans are necessary for the State to be able to discharge its functions properly.

Loans should as far as possible be internal rather than external.

UNEMPLOYMENT AND THE TRADE CYCLE

§1. **Unemployment.**—Unemployment may be regarded as the shadow side of economic progress. The unemployment problem in its present form is a special product of the Industrial Revolution. Up to 1914, the margin of unemployment in England varied from 2%, even at the height of industrial prosperity, to 12% in times of economic depression. Between the wars (1918-1939), however, unemployment assumed much more alarming proportions in many countries of the world. 'At the beginning of 1932, there were at least 25,000,000 unemployed in Europe and America, and this total was at least four times as great as the total three years before.'¹ This estimate, it may be remarked, leaves out of account the unemployed in the countries of other continents.

§2. **Causes of unemployment.**—The adverse effects—social, economic and political—of unemployment are obvious. Apart from individual hardship and the sense of economic uncertainty caused by it, prolonged unemployment affects disastrously the efficiency of workers and saps the moral fibre of society. The grave discontent it generates is also fatal to social and political stability.

In the first place, we may distinguish between unemployment in *particular trades* and unemployment of a more *general character* affecting many trades and several countries simultaneously.

As regards unemployment in particular trades, there are certain *seasonal trades* such as agriculture, building, cotton-ginning and fishing, in which demand for labour is also naturally seasonal. India being primarily agricultural, such seasonal unemployment constitutes one of its major problems. During the slack season in agriculture, especially in areas of dry farming, the cultivators and agricultural labourers have no work for about four to six months in the year. Inter-trade adjustments and a well-regulated and brisk contact between town and country life may mitigate to some extent the hardships arising from this kind of unemployment. In India the problem is particularly acute owing to the absence of subsidiary occupations.²

¹ Cole, *op. cit.*, p. 311.

² See *Elements of Indian Economics*, ch. iii, §15.

Changes of fashion and taste, which particularly affect the textile and luxury trades, and the introduction of *new processes and of labour-saving machinery* are other causes of maladjustment and unemployment. Owing to constant fluctuations of demand which cannot be controlled, a fluctuating but permanent margin of unemployment appears to be inevitable in the modern economic system. A certain percentage of 'waiters', or a reserve of labour, seems to arise which is drawn upon more or less by industry according to need. Between the wars (1918-39), the rapid spread of rationalization of industry, especially in the U.S.A. and Germany, has been responsible for a good deal of unemployment.

§3. **The trade cycle in relation to unemployment.**—A more serious problem is presented by widespread unemployment of a *general* character affecting practically all industries in all countries simultaneously. There are widespread periodic movements of trade depressions which alternate with business prosperity and booms, in a definite rhythm based on the internal working of the economic system. Before the 1914-18 war, it was observed that economic depressions or crises occurred roughly once every ten years. Latterly, this 'trade cycle' seems to have shortened, and its duration appears to be now seven rather than ten years. The depression after 1929 was not wholly due to the usual periodical turn in the tide of prosperity. Various new factors aggravated if not originated it, such as the inflation of the main currencies of the world after 1918, war debts, reparations and the dislocation of normal economic life caused by them, the collapse of industries like the engineering and steel industries which had been overstimulated during the war, the network of tariffs, and other commercial barriers.

§4. **The trade cycle.**—Trade and industry are to be imagined as perpetually revolving through a series of phases which together constitute a cycle. When one cycle is completed, another one begins, reproducing the same general features following each other in substantially the same sequence. The description of the cycle may be begun at any of its different stages. For example, let us suppose we begin at a point where trade and industry are showing signs of recovery after a period of depression. Prices and profits are rising and production is being extended, especially in the case of industries producing capital goods (e.g. iron and steel). Since wages, interest and other fixed charges do not rise as fast as prices, employers, producers and business men are experiencing a boom. There is everywhere a spirit of optimism, and optimism in course of

time degenerates into a spirit of gambling. Excessive risks are taken, unsound companies are floated, and the process is made all the easier because credit is made too freely available by banks for financing all kinds of ventures—the banks, like everybody else, being affected by the all-pervading spirit of excessive buoyancy and hopefulness. But eventually troubles begin to appear. Wages and other costs rise; profit margins are cut down; inefficient business units, after a brief spell of hectic existence, begin to totter; bankers get alarmed and restrict credit by raising their money rates; stocks accumulate; prices fall; business concerns are paralysed, and unemployment becomes widespread and acute. The period of depression thus begins, its advent being usually signalized by the failure of one or two large business concerns or financial houses.

This depression sooner or later supplies its own correctives. The very curtailment of business activity leads to the gradual deflation of stocks; and after a period of quiescence, characterized by low prices and low costs, business activity is resumed under the pressure of consumers' demand and the renewal of business confidence. Employment expands, bank credits begin to be reissued, and the cycle begins its upward movement again.¹

§5. Theories of the trade cycle.—Economists are divided among themselves as regards the exact causes of the trade cycle. Various theories have been put forward from time to time, and some of these are given below :

(i) *Physical theory.*—This was suggested by W. S. Jevons and is known as the 'sun-spot theory'. According to Jevons, economic crises occur owing to the periodic appearance of spots on the surface of the sun affecting meteorological conditions and, through them, harvests and agricultural production. Agriculture being the basic industry, all other industries and economic activities are also affected. This theory stands discredited today on the ground that it exaggerates the climatic factor and ignores financial, industrial, and social causes of trade fluctuations.

(ii) *The psychological theory.*—According to this theory, trade fluctuations arise owing to the rhythmic movements of the human mind. In business as elsewhere the human mind is subject to waves of elation and depression. Business men like others, are subject to the herd instinct. Optimism breeds further optimism, as pessimism in one quarter gives rise to pessimism in others. We thus get the upward and the down-

¹ See *Encyclopædia Britannica*, 11th ed., vol. xii, article on 'Unemployment'.

ward movements of the trade cycle. Thus industrial fluctuations arise owing to errors of over-confidence and miscalculations regarding demand, and when the inevitable depression sets in it is aggravated by excessive and often unjustifiable pessimism.

This psychological explanation doubtless contains an element of truth,* and it also does succeed in accounting at least partially for the manner in which the successive phases of a trade cycle appear. At the same time we must go behind these mental phenomena which are themselves influenced by certain objective factors, like money and credit, affecting industrial progress.

(11) *The monetary theory.*—According to this theory it is the defective working of the monetary and banking structure that puts our industrial system out of gear from time to time. It is suggested that the banks, after allowing credit to expand to a point, suddenly contract it; thus credit stringency causes business stagnation. This theory is generally favoured by business men, who are always for a policy of easy money. It also enables them to shift the blame for depression on to other people than themselves. It is true that bankers like all men are liable to error, and it is probable that sometimes they allow credit to expand unduly before crying halt. At the same time contraction of credit may be urgently needed whatever immediate inconvenience it may cause, and bankers should not be blamed uncritically and indiscriminately every time they adopt the policy of contraction. After all, it must be remembered that the natural bias of banks is in favour of the expansion rather than the contraction of credit, because expansion increases and contraction diminishes their volume of profitable business. If they deliberately contract credit the presumption should be that there are sound reasons for such a policy. Nor must we forget that in most countries legislation, commonly admitted to be necessary, exists by which limits are imposed on the expansion of credit by banks. Again, so long as credit systems are to any large extent based on gold, variations in the supply of gold will cause corresponding variations in the supply of money and credit, and therefore fluctuations in prices, inducing trade booms and depressions. This question however has already been discussed in Chapter X. On the whole our general conclusion is that while monetary factors, by producing disturbances in the price level, cause economic upheavals, industrial fluctuations cannot be adequately explained with sole reference to factors connected with them.

(iv) *The under-consumption (over-saving) theory.*—This theory has been ably propounded by J. A. Hobson. He argues that in our present economic organization wages lag behind prices, and therefore when trade is expanding and prices are rising, business profits increase faster than wages. This results in over-saving and over-investment, especially in the constructional (basic) trades turning out capital goods (iron and steel, engineering, etc.). The demand from the great mass of consumers lags behind and is soon outstripped by productive activity. This results in the industrial system being congested with unsold products, and business stagnation and unemployment ensue. This theory, however, does not explain why slumps end and prosperity returns.

G. D. H. Cole suggests that 'slumps end and business prosperity returns partly because economic progress is the normal condition of the modern business world, but also partly because either some fortunate event (e.g. fresh discoveries of gold, opening-up of undeveloped areas, etc.) or some policy deliberately pursued (e.g. reversal of banking policy in the direction of cheap money policy) suffices to correct the tendencies making for depression and to bring about a reversal'.¹

There is thus no single all-embracing explanation of the trade cycle and the cyclical unemployment that follows in its wake. A number of complex forces are obviously at work. We have already shown that under the capitalistic system of today, production is undertaken long in anticipation of demand, that the producer is often separated from the final consumer by a long chain of middlemen, and that the chances of committing errors of calculation are great, especially when it is remembered that business men are highly suggestible and susceptible to the herd instinct. Banking and monetary policies operating through price changes and the tendency in modern communities to over-save and over-invest play their own part in producing dislocations of the economic system.

§6. **Remedies for unemployment.**—(i) In the first place, there are certain palliatives like *Labour Exchanges* which, by supplying information to prospective employers and employees, tend to promote the mobility of labour. They are also useful in securing the continuity of employment even for labour engaged in seasonal employments.

(ii) There is really no way of preventing unemployment in particular trades arising from changes of fashion and of taste, which are inevitable in a progressive dynamic society. What is possible is relief by prompt adjustment, e.g. by en-

¹ Op. cit., pp. 342-3.

abling labour affected by slackness in one industry to transfer itself quickly to another industry which may just then be entering on its busy season.

(iii) So far as unemployment is due to cyclical fluctuations, it is not easy to suggest preventive measures. Better banking and monetary policies and systems, better education of business men, increase in useful current public expenditure, conscious economic planning by the State, a better adjustment between production and consumption, or between saving and spending, should all tend to reduce the severity of unemployment. Pre-war unemployment was to no small extent due to the sabotage of commercial relations (by tariff barriers, dumping, etc.). We may hope, when the present war is over, for a better appreciation of the economic interdependence of nations and a gradual removal of these restrictions.

Assuming, however, that industrial fluctuations and periodical unemployment are inevitable under the present economic system, we must proceed to consider methods of meeting them.

(iv) It is suggested that *construction of public works* such as roads, canals, railways, housing, drainage schemes and hydro-electric projects, with the help of money borrowed by the State (by the central Government and the local authorities), should be undertaken in a period of trade depression, when private employment shrinks, in order to absorb the unemployed.¹ The usual criticism of such a plan is that it merely leads to extravagant expenditure of public money and much waste due to the ineptitude of public administrators who have no personal interest in the success of the undertakings. State provision of work on a large scale was undertaken in the slump in the U.S.A., Great Britain and some other countries. It is also justified on the ground that large State expenditure on public works in times of persistent trade depression is useful in stimulating private capitalists and entrepreneurs, as State expenditure creates an indirect demand for their activities. If such a policy is wisely conceived, it will, no doubt, result in the development of national resources. But actually the schemes may not be well planned or well carried out. Lastly, there is a limit to what the State can usefully spend and afford to spend in this way during a given period.

§7. Unemployment insurance.—Unemployment insurance has played and is playing a part of growing importance in giving relief to the unemployed, the victims of trade depression, in

¹ Lord Keynes, who is an ardent advocate of public works, has explained his scheme of attack on cyclical depressions through loan expenditure on such works in his book, *Means to Prosperity*.

countries like Great Britain (and in Germany up to the coming of the Nazis).

Towards the end of the last century it was realized that unemployment was an insurable risk and that it was the duty of the three main parties concerned—employers, employees and the State (the last being interested in the economic welfare of the nation as a whole)—to bear the burden and to distribute it among themselves. Great Britain passed the Compulsory National Health Insurance Act in 1911, Part II of which for the first time provided for compulsory contributory unemployment insurance. The Act applied in the first instance to seven selected groups of trades peculiarly liable to irregular employment, such as building, mechanical engineering and shipbuilding. Employers and employees were required to make contributions in equal amounts, the State also adding its own contribution. Limited benefits were to be given to the insured worker who was out of employment. The new scheme proved a success and was extended in 1916 to other trades and to workpeople engaged in munition work. Owing to the severe depression which set in in 1920, the original scheme was greatly extended in that year, and the whole working-class population in industries (the exceptions being agriculture and domestic service), numbering some 12,000,000, was compulsorily insured. The scheme was to be administered by the Ministry of Labour. The pre-(1914)-war scheme of National Unemployment Insurance was subjected to severe strain and proved inadequate to cope with the 1929 depression. It therefore had to be supplemented by the assumption of the greater part of the burden by the State itself, which has thus been compelled directly to maintain the large army of the unemployed.

Certain other remedies have also been suggested as a cure for employment. They are as follows :

- (i) Provision of technical education so as to train the unskilled to take to skilled trades.
- (ii) A higher school-leaving age, so as to keep out competition from juvenile labour.
- (iii) Short-time working in periods of business stagnation.
- (iv) Compulsory retirement of aged workers (with a suitable provision of old-age pensions for them).

It is thus clear that just as there is no single cause of unemployment there is also no single remedy for it.

SUMMARY

Unemployment is the shadow side of economic progress. It assumed alarming dimensions during the post-war depression.

As regards *causes of unemployment*, there is unemployment in particular trades owing to the demand for labour in them being seasonal, owing to changes of fashion and taste, and to mechanization (or rationalization) of industry. Far more serious is the *cyclical* unemployment of a general character caused by the periodic movements of trade depression which alternate with business prosperity (or booms). The 1929 slump was not simply a manifestation of the usual trade cycle, but was aggravated by a number of evil legacies left by the war of 1914-18.

There are various *theories of the trade cycle*: (i) The physical theory, (ii) the psychological theory, (iii) the monetary theory, and (iv) the under-consumption (over-saving) theory, all partially explaining the phenomenon.

Various *remedies* for unemployment have been suggested, such as (i) the establishment of Labour Exchanges; (ii) relief by prompt adjustment; (iii) better banking and currency policies, and economic planning by the State to reduce trade fluctuations; (iv) construction of public works by the State; (v) unemployment insurance and (vi) other remedies such as technical education, raising the school-leaving age, working short time, and the compulsory retirement of aged workers.

TYPICAL QUESTIONS

I

INTRODUCTORY

1. What is economics? Is it a science or an art or both?
2. Discuss the subject matter and scope of economics. How far is economics useful in the solution of practical problems? Give Indian examples.
3. (i) 'Economics is the science of wealth'
(ii) 'Economics is the study of man in the ordinary business of life.'
(iii) 'Economics is concerned with disposal of scarce means which have alternative uses.'

Which of these definitions of economics do you consider the most acceptable and why?

4. Explain the conception of 'economic man' and discuss the validity of the assumptions underlying this conception.

5. Economics has been criticized as a dismal science which deals with man engaged in the selfish pursuit of wealth. Do you agree?

6. What is meant by saying that economics 'postulates self-interest of an enlightened character'?

7. 'Wants—efforts—satisfactions constitute the essence of economics' Discuss.

8. Explain the deductive and inductive method and show why a judicious combination of both is necessary in economics.

9. Which is the best method of pursuing economic investigations?

10. Explain the distinction between an economic law and statute law and show how all economic laws are mere statements of tendencies.

11. 'The laws of economics are to be compared with the laws of tides rather than with the simple and exact law of gravitation' Comment.

12. Explain the traditional divisions of the subject-matter of economics and indicate the criticisms to which they have been subjected by modern writers.

13. Discuss the interrelations between the several divisions of economics.

14. Indicate the place of economics among the social sciences.

15. Discuss the relation of economics to sociology. How far is it desirable to look upon the former as merely a subdivision of the latter?

16. Examine the relation between economics and politics and show how far it is either desirable or practicable to keep them apart.

17. In what way is economics related to ethics?

18. 'There is no antithesis between economics and ethics' Discuss.

19. What is meant by saying that 'economics is entirely neutral between ends'?

II

LANDMARKS OF ECONOMIC DEVELOPMENT

1. Review the early stages of economic development. Is there any particular chronological sequence to be observed in stating them?

2. Discuss the main stages of industrial evolution and bring out the characteristic features of each one of them.
3. Compare the domestic system with the factory system. To what extent does the former system exist in India? (See also *Elements of Indian Economics*, chs. II and IV)
4. Discuss the main features of the Guild system and compare it with the caste *panchayats* in India. (See also *Elements of Indian Economics*, ch. I)
5. What is meant by the expression 'Industrial Revolution'? Why did this revolution first take place in England?
6. Give a brief account of (i) agriculture, (ii) industries; (iii) transport, and (iv) trade in England before the Industrial Revolution
7. Describe the main inventions that brought about the Industrial Revolution in England and show how it is almost a universal phenomenon
8. Review the course of the Industrial Revolution in England.
9. Compare social and economic life in England in 1850 with that prevailing before the Industrial Revolution
10. Clearly bring out the social and economic effects of the Industrial Revolution.
11. Indicate the benefits conferred by the Industrial Revolution, as also the evils for which it is responsible

III

FUNDAMENTAL CONCEPTS OF ECONOMICS

1. Define utility. Give a classification of utilities and clearly bring out the distinction between free utilities and economic utilities
2. What are the fundamental characteristics of wealth? What is meant by the statement that wealth consists of goods which possess exchange value?
3. Are the following wealth or not?
 - (i) Love of a mother for her child
 - (ii) A surgeon's skill
 - (iii) Good health
 - (iv) Goodwill of a business
 - (v) Air
 - (vi) Sunlight.
 - (vii) The Ganges
 - (viii) Money
 - (ix) Professional services
- Give reasons for your answers
4. Examine Marshall's classification of goods, and discuss each category, giving appropriate illustrations.
5. Distinguish between individual and national wealth. Give Indian examples
6. Make as complete a list as possible of the items of the wealth of (i) a farmer, (ii) an artisan, and (iii) a millowner in India.
7. What is cosmopolitan wealth?
8. Explain the various meanings of the term 'income'. What is national income?
9. Indicate the relation between wealth and income
10. Why is value regarded as the central concept of economics?
11. Distinguish between value-in-use, value-in-exchange and intrinsic value.
12. 'Value is the result of the social estimates of goods affected by transferring them in exchange.' Discuss.
13. Explain the distinction between (i) value and utility; (ii) value and price.

IV

CONSUMPTION THE THEORY OF WANTS

1. Define consumption and show why it should be studied before production. (See also ch 1)
2. Indicate the relation of consumption to production and distinguish between 'productive consumption' and 'final consumption'. (See also ch 1)
3. (i) 'Consumption is the end of all economic activity.' (ii) 'The existence of human wants is the starting point of all economic activity.' Discuss
4. How far is the multiplication of wants desirable?
5. Discuss the main characteristics of human wants and show how they are of basic importance in the study of economics
6. State and discuss the Law of Diminishing Utility. Draw an illustrative diagram. Is the law subject to any exceptions?
7. Distinguish clearly between total utility and marginal utility
8. Indicate the relation between marginal utility and price and explain why air or water has little or no value while gold commands a high value.
9. Apply the concept of marginal utility to the case of money and show how it has a bearing on certain problems of taxation. (See also ch xvii.)
10. Explain the Law of Equimarginal Utility and show how it is modified in life by the influence of custom or fashion
11. On what principle should a person regulate his expenditure in order to obtain the maximum satisfaction from it?
12. Discuss the application of the Law of Equimarginal Returns (Substitution) to production.
13. Explain the new concept of Marginal Rate of Substitution and indicate its significance
14. Distinguish between necessities, comforts and luxuries
15. Make a list of necessities for efficiency required by (i) a farm labourer and (ii) an urban worker in India
16. 'What is luxury to some is necessary to others.' Comment
17. Analyse the concept of Standard of Living and how it varies from time to time, class to class and country to country
18. Show how the low standard of living in India affects economic efficiency
19. Show how both saving and spending are necessary for economic stability
20. Enunciate and explain Engel's Law of Family Expenditure and indicate its application to India
21. What is a family budget? What are the main items included in it? Give any typical budget you may have studied
22. Examine the uses of a study of family budgets to (i) the householder and (ii) the economist.
23. Elucidate the doctrine of consumer's surplus. How far is it possible to measure this surplus in terms of money? What is the practical use of the doctrine?
24. What is meant by 'demand' in economics? Distinguish clearly between individual demand and market demand for a commodity
25. Construct a Market Demand Schedule for sugar, showing separately the demand of the rich, middle and poor classes. Illustrate your answer by drawing appropriate demand curves.

26. Explain the Law of Demand and indicate its relation to the principle of diminishing utility.
27. Distinguish between elastic and inelastic demand with the help of demand curves.
28. Determine the nature of demand in the following cases: (i) necessities; (ii) luxuries; (iii) a commodity having several uses; and (iv) when an article is offered at very high or very low prices. Give appropriate illustrations.
29. Explain the mode of measuring elasticity of demand. Show how elasticity influences determination of value. (See also ch. ix.)
30. Discuss the factors which bring about a change in demand, independently of changes in price.

V

PRODUCTION: LAND

1. Explain the meaning of production and classify the various productive occupations.
2. 'Man produces and consumes utilities only.' Discuss.
3. Distinguish between form utilities, place utilities and time utilities.
4. What are the functions performed by middlemen? Are these sufficient to justify their inclusion in the category of productive workers?
5. Explain the distinction between productive and unproductive labour. Is there any unproductive labour at all? Give illustrations.
6. Indicate the various factors of production and show which of them should be regarded as the primary factors.
7. Indicate the criticisms to which the traditional classification of the factors of production have been subjected.
8. What is meant by 'land' in economics? Distinguish it from capital. (See also ch. vii.)
9. Examine the influence of natural resources on the economic welfare of a country. Draw your illustrations from England and India.
10. 'Nature is the very foundation of economic life.' Comment.
11. State and examine the Law of Diminishing Returns and indicate the qualifications to which it is subject.
12. Explain the extensive and intensive aspects of the Law of Diminishing Returns. Draw an illustrative diagram.
13. Examine the significance of the Law of Diminishing Returns and indicate its bearing on (i) the Malthusian theory of population and (ii) the theory of rent. (See also chs. vi and xiii.)
14. 'While the part which nature plays in production conforms to the Law of Diminishing Returns, the part which man plays conforms to the Law of Increasing Returns.' Comment.
15. Examine the operation of the Law of Diminishing Returns in the case of (i) building sites; (ii) mining; and (iii) fisheries.
16. Explain the terms (i) 'dose of labour and capital'; (ii) 'marginal land'; and (iii) 'extensive and intensive methods of cultivation'.
17. Does the Law of Diminishing Returns also apply to factors of production other than land?

VI

PRODUCTION · LABOUR

1. Define labour and stress its fundamental characteristics.
2. Name some activities which do not constitute labour in the economic sense. Give reasons for your answer.
3. 'The fundamental problems that arise in economics are concerned with the relation between unwelcome exertion, and the remuneration which induces that exertion.' Discuss.
4. Examine the several factors which affect the efficiency of labour.
5. Show why the Indian labourer is, as a rule, less efficient than the English or Japanese worker.
6. Examine the relation between wages and efficiency and explain the paradox 'cheap labour is dear labour'.
7. Discuss the Malthusian theory of population and indicate the modifications it needs to make it fit in with present-day conditions.
8. The problem of population is not one of mere size in relation to food supply but of efficient production and equitable distribution.' Discuss.
9. Do you agree that the Malthusian theory of population has lost its terrors for modern society?
10. Distinguish between positive and preventive checks and indicate your choice, giving full reasons.
11. Explain the concept of 'optimum population'. To what extent is it an improvement upon the earlier population theories?
12. Examine the factors which determine the density of population, giving illustrations from England and India.
13. What inferences can you derive from the fact that England has a density of 664, U.S.A. 41, India 195, Bengal 646? (See also *Elements of Indian Economics*, ch. 1)
14. What is meant by mobility of labour? Why is labour generally more immobile than capital?
15. Distinguish and explain the various forms of mobility of labour.
16. 'Of all sorts of luggage man is the most difficult to be transported' Discuss with special reference to India. (See also *Elements of Indian Economics*, ch. 1)
17. Discuss the factors which in recent years have increased the mobility of labour.

VII

PRODUCTION · CAPITAL

1. Explain the concept of capital and elucidate the part played by capital in the modern organization of production.
2. Discuss the distinction between producer's goods and consumer's goods.
3. What are the functions of capital? What is meant by saying that capitalistic production involves a roundabout process?
4. Indicate the relation between capital and money. Show how far capital depends upon use and intention.
5. Examine the grounds on which land is usually distinguished from capital.
6. Classify capital and indicate the utility of each form.

7. Distinguish between fixed and circulating capital and show how the former is of great advantage in production.
8. Explain the process of the formation of capital.
9. What is meant by saying that capital is the result of 'saving'?
10. Distinguish clearly between saving and hoarding. How far may saving be said to entail 'abstinence'?
11. Discuss the factors which influence the growth of capital in a country.
12. Account for the slowness and slow growth of capital in India.
13. Indicate the relation between the rate of interest and the volume of saving.
14. State the conditions that promote and those that hamper the accumulation of capital.
15. What is meant by mobility of capital? How far can capital be said to be mobile in India?

VIII

PRODUCTION: ORGANIZATION OF INDUSTRY

1. Explain the functions performed by the entrepreneur in modern business organization.
2. Why is a special class of organizers necessary? Why are they called 'captains of industry'?
3. What are the qualities essential for an ideal entrepreneur? Give a few examples of successful entrepreneurs in England, India, and the United States.
4. What are the main features of the modern industrial organization?
5. Review the principal types of entrepreneurial organization.
6. Indicate the characteristic features of a joint-stock company and compare it with a partnership.
7. What are the strong and weak points of the joint-stock organization of industry?
8. Show how a joint-stock company is organized and managed. How does it raise the capital it requires?
9. Explain co-operative production and account for its poor progress.
10. Discuss the fundamental principles underlying co-operation and show how it avoids the drawbacks of both capitalism and socialism.
11. Describe the plan of profit-sharing. Why has it failed to evoke much enthusiasm?
12. Account for the increasing scope of State undertakings and indicate their advantages and drawbacks. (See also ch. xvii.)
13. Describe the various forms which division of labour assumes.
14. Show how division of labour is limited by the size of the market. Give Indian examples.
15. Explain how division of labour also implies co-operation.
16. What are the benefits of division of labour? Indicate its defects and show how far they are remediable.
17. Examine the contribution made by machinery and technical improvements to economic and social progress.
18. Discuss the effects of machinery from the point of view of the working classes.
19. Examine the factors which bring about localization of industry. Give

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illustrations from any two leading industries in India. (See also *Elements of Indian Economics*, ch. iv.)

20. Why does an industry once started in a particular place tend to remain there?

21. Discuss the advantages and drawbacks of localization of industry.

22. Account for the recent tendency towards decentralization of industry.

23. Distinguish between the external and internal economies of a business.

24. Why are modern industries organized on a large scale? Indicate the limitations of large-scale production and explain in this connexion the concept of the optimum firm.

25. Discuss the principal economies of large scale production.

26. Account for the survival of small-scale production, with special reference to conditions in India.

27. Indicate the main advantages and drawbacks of small-scale production.

28. Discuss the economies and limitations of large farms.

29. What are the advantages and drawbacks of small-scale farming, and how can the latter be remedied? Why are small farms better suited to India?

30. Give a clear exposition of the Law of Increasing Returns. Also present it as a Law of Diminishing Cost.

31. Enunciate the Law of Constant Returns and indicate the cases where it operates.

32. Account for the growing tendency towards large industrial combinations.

33. Distinguish between (i) horizontal and vertical combinations, (ii) trusts and cartels; (iii) holding companies and mergers.

34. Examine the advantages and drawbacks of industrial combinations. How far is it possible to deal with the evils?

35. Explain the origin of rationalization and elucidate its main features.

36. What are the benefits of rationalization? Also indicate its dangers and limitations.

37. Analyse the assumption of perfect competition and its implications.

38. What is imperfect competition? Indicate its significance in the real world of business?

39. 'In its fundamental aspect competition lies at the root of progress and when applied under proper limitations it is as beneficent as it is widespread.' Discuss this statement and stress the limitations of competition.

IX

EXCHANGE: VALUE AND EXCHANGE

1. Give a brief account of the evolution of exchange and indicate its benefits to society.

2. 'Exchange is the barter of the comparatively superfluous for the comparatively necessary.' Discuss.

3. Explain the conditions determining exchange and show how it takes place by means of sale and purchase under a money economy. (See also ch. x.)

4. Explain the term 'market' in economics. What are the conditions governing the extent of a market?

5. Show how in a competitive market there is a tendency for a uniform price to prevail.

6. Make remarks on the probable size of the market for the following:

(i) gold; (ii) country bricks, (iii) Mangalore tiles; (iv) milk, (v) mangoes; (vi) sand, (vii) Reserve Bank shares, (viii) Suez Canal shares, (ix) an ancestral watch; (x) tea; and (xi) sugar.

7. Elucidate the nature of speculation and explain the various forms which it assumes

8. What is the economic role of speculation? What are its abuses and how would you deal with them?

9. What are the conditions of free speculative dealings in a commodity?

10. 'Speculation has its economic abuses as well as its economic functions' Discuss

11. What are the advantages of speculation on Stock Exchanges?

12. Show how value always depends upon the interaction of supply and demand

13. We might as reasonably dispute whether it is the upper or under blade of a pair of scissors that cuts a piece of paper, as whether value is governed by utility or cost of production' Discuss

14. Elucidate the marginal theory of value and show why it is necessary to study the behaviour of supply and demand at the margin

15. Clearly explain the distinction between market value and normal value and bring out the significance of the time element in the theory of value

16. Indicate the relation of the market value of a commodity to its normal value

17. Explain how market value is determined. Draw an illustrative diagram

18. Why do market prices fluctuate from day to day and even on the same day?

19. Show how the value of a reproducible commodity under competition tends to settle in the long run at its cost of production

20. How is normal value determined under (i) increasing (ii) diminishing, and (iii) constant cost? Draw diagrams to illustrate your answer

21. Analyse the conception of cost of production, distinguishing between prime and supplementary costs

22. Explain the meaning of representative firm. Indicate the use of this concept in the theory of value

23. What are complementary goods? Explain the terms (i) joint and (ii) composite demand

24. What are joint products? How are their values determined? How far can railway rates be explained with the help of the principle of joint cost?

25. Define monopoly. Clearly distinguish between the various classes of monopolies

26. Show how value is determined under monopoly. Draw a diagram to illustrate your answer

27. Compare monopoly value with value under competition

28. Indicate the considerations which a monopolist will bear in mind while charging a particular price to his customers

29. Show how and why a monopolist resorts to price discrimination

30. How far is monopoly detrimental to the consumer? Indicate the restraining influences to which a monopolist is subject.

31. Discuss the rival merits of competition and monopoly. Must we always choose one or the other? (See also ch viii.)

EXCHANGE: MONEY

1. Explain the inconveniences attendant upon barter and show how these are removed by the introduction of money
2. Compare exchanges under a money economy with those under a system of barter
3. Define money, and carefully explain the distinction between money and currency. Give examples
4. Examine and classify the functions of money and show how production and exchange are greatly facilitated by the use of money
5. What are the qualities of a good money material?
6. Account for the universal use of precious metals as money.
7. Distinguish between standard and token coins and clearly bring out their respective characteristics
8. Explain how token coins circulate at a value higher than their intrinsic value
9. 'The rupee is a curious mixture of token and standard coin' Discuss (See also *Elements of Indian Economics*, ch vi)
10. Explain clearly the distinction underlying the following (i) free coinage and gratuitous coinage, (ii) mint price of gold and market price of gold, (iii) debasement and depreciation.
11. What is legal tender? Give illustrations from the British and Indian currency systems (See also *Elements of Indian Economics*, ch vi)
12. Give a clear exposition of Gresham's Law. Indicate its limitations
13. What is meant by a monetary standard? Describe the principal types of monetary standards
14. What are the essentials of the Gold Standard? Compare it with Bimetallism
15. Distinguish between the various forms of the Gold Standard and bring out their merits and demerits
16. Explain the principal features of the Gold Bullion Standard and compare it with the Gold Exchange Standard
17. Discuss the strong and weak points of the Gold Standard and indicate its future
18. What are the essential conditions for Bimetallism? Give a brief account of its working during the last century
19. Examine the question of international Bimetallism
20. Distinguish and explain the principal forms of paper money. Indicate the advantages of a good system of paper money
21. Discuss the evils of inconvertible paper money. What are the usual signs of its overissue?
22. What are the prospects of the Managed Paper Currency Standard?
23. What are index numbers? How are they constructed? Explain their uses
24. What is the most satisfactory method of constructing index numbers?
25. What are weighted index numbers and what purpose do they serve?
26. Explain how the Real Wages Index Number is prepared. Indicate its use in labour disputes (See also ch xvi.)

- 27 Set forth the Quantity Theory of Money and explain the qualifications to which it is subject.
- 28 Discuss the formula $PT = MV + M'V'$
- 29 What is meant by the value of money? Compare it with the value of ordinary commodities
- 30 Why does the value of money fluctuate from time to time?
- 31 Discuss the effects of changes in the general price level on the different classes of the community.
- 32 Discuss the problem of price stability and explain some of the schemes that have been put forward to ensure a stable standard of value
- 33 What are essentials of a sound monetary system?

X I

EXCHANGIL CREDIT AND BANKING

- 1 Elucidate the nature of credit and bring out its main characteristics.
- 2 'Credit is virtually a contract for the future delivery of money.' Discuss
- 3 Explain the principal instruments of credit and give specimens of each of them
- 4 Explain how credit economizes the use of metallic money
- 5 What are the services rendered by credit to society? Also indicate its abuses
- 6 Examine the relation between credit and capital
- 7 Show how banking occupies a most important position in the modern economic world
- 8 Describe the various functions performed by modern banks.
- 9 Enumerate the different types of banks and briefly indicate the nature of the functions undertaken by them
- 10 Comment on some leading features of modern banking organization
- 11 Write notes on (i) bank amalgamations, (ii) branch banking, and (iii) unit banking
- 12 Describe the operations of a typical commercial bank.
- 13 Distinguish between the various classes of deposits and explain the working of the cheque system
- 14 Discuss the limitations to the 'creation' of bank money
- 15 Describe the mechanism of the clearing house organization.
- 16 Indicate the various kinds of loans and advances given by banks to their clients
- 17 What is meant by the discounting of commercial paper? Why is it considered as a safe investment for the funds of a commercial bank?
- 18 Show why banks should maintain adequate cash reserves What help can legislation offer in this matter?
- 19 Discuss the arguments for and against a 'free' banking system
- 20 Discuss the opposite points of view represented by the Currency School and Banking School and indicate their respective merits and demerits
- 21 Review the principal methods of regulating note issue in the different countries of the world including India (See also *Elements of Indian Economics*, ch vi)
- 22 Explain the proportional reserve system and its advantages

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23. What are the principal functions performed by a Central Bank? How does it control the credit operations of other banks?

24. What are the principal weapons of central bank control over credit?

25. Examine the effects produced by bank rate changes with special reference to internal economic activity.

26. Give a brief account of the Bank for International Settlements.

XII

EXCHANGE: INTERNATIONAL TRADE

1. Compare international trade with domestic trade and clearly bring out the distinguishing characteristics of the former.

2. In what respects does the trade between Bombay and Delhi differ from that between Bombay and London?

3. Give a clear exposition of the theory of comparative costs and show how international values are determined.

4. Explain how international trade arises. Would you say that in the last analysis it is a kind of barter?

5. Distinguish between the balance of trade and the balance of payments (accounts) with special reference to India.

6. Explain how Great Britain is able to import more goods than she exports.

7. Clearly explain invisible exports and imports. Prepare a list of both visible and invisible items for Great Britain and India, in the form of a balance sheet.

8. What are the advantages of international trade and its possible disadvantages?

9. Review the chief arguments in favour of free trade and show why it has been almost universally abandoned today.

10. Examine the case for protection with special reference to India. (See also *Elements of Indian Economics*, ch. iv.)

11. Carefully explain and scrutinize the infant industries argument with special reference to India. (See also *Elements of Indian Economics*, ch. iv.)

12. Indicate the limitations and dangers of a policy of protection. How would you prevent or minimize them?

13. What is meant by 'Dumping'? Show the various forms which it takes. How far is it desirable to adopt anti-dumping measures?

14. Explain how obligations and claims arising from imports and exports of goods are settled. Give Indian examples.

15. Examine the part played by banks in liquidating international indebtedness.

16. What is the mint par of exchange? Can there be such a par between a Gold Standard country and a Silver Standard country? If not, why not?

17. Explain the gold (specie) points and show how fluctuations in exchange rates are restricted to these points so long as the Gold Standard is in effective operation.

18. Critically examine the validity of the popular expressions 'favourable' and 'unfavourable' exchange.

19. What are the various methods of remitting funds from Bombay to London? Which is the cheapest and which is the most expensive method?

20. Explain the two principal methods of exchange quotations, and show by appropriate Indian examples how a simultaneous use of both these methods causes confusion.

21. Set forth the purchasing power parity theory and bring out its limitations.

22. 'The purchasing power parity theory does not provide a ready-made measure of the "true" value of the exchanges' Discuss

XIII

DISTRIBUTION RENT

1. State in general terms the problem of distribution. What are the main questions to be considered in connexion with the subject?

2. In Distribution we are concerned with functional and not personal distribution. Explain this.

3. 'The National dividend is at once the aggregate net product of, and the sole source of payment for, all the agents of production within the country' Discuss

4. Show the application of the marginal theory to distribution. Can distribution be explained entirely with reference to the general theory of value?

5. Give a brief account of the evolution of private property.

6. Show how the institution of private property underlies the whole scheme of distribution of wealth.

7. What rights are implied in private property? Use your analysis for answering the question whether land is or is not private property in India (See also *Elements of Indian Economics*, ch. III)

8. Distinguish between the right of inheritance and the right of bequest. Do you think that it is desirable to maintain these rights in their full strength?

9. Explain briefly the principal theories of private property and indicate their respective merits and demerits.

10. Explain the distinction between contract rent and economic rent. Give illustrations.

11. Explain as clearly as you can the Ricardian theory of rent. Indicate the qualifications to which it is subject.

12. If all lands were equal in point of 'fertility' would there be a theory of rent?

13. Indicate Carey's criticism of the Ricardian theory of rent.

14. Show by means of a diagram how rent arises both under extensive and intensive cultivation.

15. Why is rent called an unearned increment? If it is 'unearned' are rent receivers (landlords) social parasites? How far is the State justified in appropriating rent?

16. 'Rent is paid for the original and indestructible powers of the soil' Explain this proposition and consider how far the rents that are actually paid conform to this description.

17. 'Rent does not enter into price' Explain this statement, noting exceptions, if any.

18. 'Corn is not high because rent is paid but rent is paid because corn is high' Discuss.

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19. Tradesmen often say that they have to charge high prices because they have to pay high rents. Do you agree?

20. Rent is something that is (i) differential and (ii) permanent. Explain this.

21. Indicate the application of the theory of rent to urban sites.

22. Why do rents rise and fall? Clearly bring out the effects of economic progress on rents.

23. (i) Write a note on quasi-rent. (ii) What is 'rent of ability'?

24. Examine the application of the theory of rent to (i) wages, (ii) interest; and (iii) profit.

XIV

DISTRIBUTION: WAGES

1. Explain the nature of wages.

2. Distinguish between time wages and piece-work wages and indicate their relative advantages.

3. What are the peculiarities which differentiate labour from an ordinary commodity and which necessitate a special theory of wages?

4. Explain fully the difference between nominal and real wages.

5. What do you mean by the 'net advantages' of an occupation? Do wages always accurately measure 'net advantages'?

6. Why do wages differ (i) from occupation to occupation and (ii) from country to country?

7. Explain why women's wages are generally lower than men's.

8. Discuss the subsistence theory of wages. Is it the same as the Iron or Brazen Law of Wages?

9. Examine the relation between the standard of living and the rate of wages.

10. Point out the fallacies and the valid points, if any, in the Wages Fund theory.

11. In what respects do you consider the marginal productivity theory of wages more satisfactory than the earlier theories?

12. Show how in actual experience wages may differ from their level as determined by the marginal product of labour.

13. Explain what is meant by the 'discounted marginal productivity of labour'.

14. How far is it possible by Trade Union action to raise wages permanently (i) in any given occupation; (ii) in all occupations?

XV

DISTRIBUTION: INTEREST AND PROFITS

1. What is the difference between gross and net interest? Show how the latter tends to equality.

2. Account for the fact that while the Government of India is generally able to borrow at about $2\frac{1}{2}$ per cent, and the Bank Rate is nearly the same, the peasant in rural areas has to pay 12 to 18 per cent and even higher rates of interest.

3. Distinguish between interest and usury. How far would it be correct to describe the money-lender's operations in India as usury? (See *Elements of Indian Economics*, ch. iii.)

4. Examine the effects of economic progress on interest. Can the rate of interest ever fall to zero?

5. Explain how interest is determined.

6. 'Interest is the price of time.' Explain.

7. Consider whether it would be possible to abolish interest under the present or any other form of society.

8. Discuss the socialist criticism of interest.

9. Distinguish between gross and net profit.

10. What deductions would you make from gross profits, in order to arrive at net profits?

11. Consider whether profits form part of the cost of production.

12. Show how far net profits are of the nature of rent.

13. Explain the causes of differences in normal profits.

14. 'Profits are contingent, wages are stipulated.' Discuss.

15. Is there any social or economic justification for profits? Do you consider that profits are excessive under the present capitalistic system?

XVI

DISTRIBUTION: SOME GENERAL PROBLEMS

1. Discuss the causes of industrial disputes which are a feature of modern society.

2. Emphasize the need for industrial peace and discuss the ill-effects of strikes and lockouts.

3. What steps would you recommend for preventing industrial disputes?

4. Explain the scheme of Whitley Councils and indicate its strong and weak points.

5. Discuss the principal methods of settling industrial disputes.

6. Examine the plan of compulsory arbitration of industrial disputes in New Zealand and Australia. How far is such procedure desirable?

7. Are Trade Unions purely obstructive? If not what are their functions and uses?

8. Review the Trade Union movement in Great Britain.

9. Form a critical estimate of the influence exercised by Trade Unions and the effects of the Trade Union movement. What are the dangers of Trade Unionism?

10. Examine the evils of modern industrialism and the factory system and show the need for the intervention of the State to safeguard the position of labour.

11. State in general terms the aims and objects of labour legislation in modern times and mention the principal items covered by it.

12. Indicate the scope of Factory and Workmen's Compensation Acts respectively.

13. Examine the scheme of national insurance against sickness and unemployment in Great Britain and Germany.

14. Examine the case for a legal minimum wage. Explain the operation of the wage-fixing machinery in Great Britain.

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15. Write a brief note on a general national minimum wage.
16. Discuss the causes of inequality of incomes.
17. Is inequality of wealth-distribution wholly an evil? How would you remedy it in so far as it is an evil?
18. 'The overshadowing fact in the distribution of property and income is inequality.' Discuss. How far is this inequality inevitable?
19. Account for the rise of modern socialism and give a clear exposition of the socialistic doctrine.
20. Consider socialism as a possible solution of the present defects in economic organization.
21. Show how on the constructive side of socialism there is a great variation in the proposals for social reconstruction.
22. Examine the influence of socialism on social legislation in modern States.
23. Indicate the strong and weak points of socialism, and mention the principal schools of socialism.

XVII

PUBLIC FINANCE

1. In what respects does public economy differ from private economy?
2. Indicate the various sources of public revenues, giving Indian examples.
3. Give a careful definition of a tax. How does a tax differ from a fee? Must a tax always be paid in money?
4. Enumerate, with brief comments, Adam Smith's canons of taxation. What are the modern additions to Adam Smith's list?
5. Clearly bring out the implications of the canon of equality.
6. Set forth the equality of sacrifice theory and compare it with the faculty theory. Indicate the respective merits of the two theories.
7. What is progressive taxation? How can it be justified with reference to the canon of equality?
8. State the case for and against progressive taxation, with special reference to India.
9. Explain the benefit theory of taxation and point out its limitations.
10. What are the main functions of taxation?
11. Consider the uses of taxation and of public expenditure in remedying social inequalities and injustices.
12. What is taxable capacity? Is it possible to measure it accurately?
13. What are the principal factors governing taxable capacity?
14. Clearly explain the distinction between direct and indirect taxation. Give illustrations from Indian conditions.
15. Discuss the comparative merits of direct and indirect taxation.
16. Distinguish between the impact and the incidence of a tax. Illustrate your answer by one or two examples.
17. Bring out the importance of the study of incidence of taxation.
18. Set forth in general outline the theory of incidence of taxation.
19. Discuss the question of incidence of taxation with reference to (i) rent; (ii) buildings; and (iii) monopolies.
20. (i) What are the principal items of public expenditure?
(ii) Suggest a suitable classification of public expenditure.

21. Under what circumstances is unproductive expenditure justifiable? Discuss the question with special reference to irrigation and famine relief in India. (See *Elements of Indian Economics*, chs. iii and viii.)

22. Give a brief exposition of the theory of public expenditure and of Governmental functions.

23. What are the dangers attendant on excessive public expenditure?

24. Set forth and explain the economic functions of the State. Give Indian examples.

25. Distinguish between public credit and private credit. How does the distinction affect the borrowing policy of the State?

26. What are the uses of public loans in peace and war? Should a war be financed by taxes or loans or both?

27. How far is it legitimate to resort to borrowing for unproductive works such as public buildings and museums, and unproductive objects like education?

28. Discuss the uses and dangers of external public loans.

XVIII

UNEMPLOYMENT AND THE TRADE CYCLE

1. 'Unemployment may be regarded as the shadow side of modern progress.' Discuss.

2. What are the fundamental causes of unemployment?

3. Consider separately the unemployment problem as it affects (i) particular trades and (ii) all trades.

4. Clearly indicate the relation between unemployment and the trade cycle.

5. Explain clearly the main phases of the trade cycle.

6. Explain briefly the principal trade cycle theories.

7. How far does excessive saving and underspending account for the present economic depression?

8. Indicate the methods of dealing with the evil of unemployment.

9. Discuss the policy of construction of public works as a remedy for unemployment during a period of trade depression.

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